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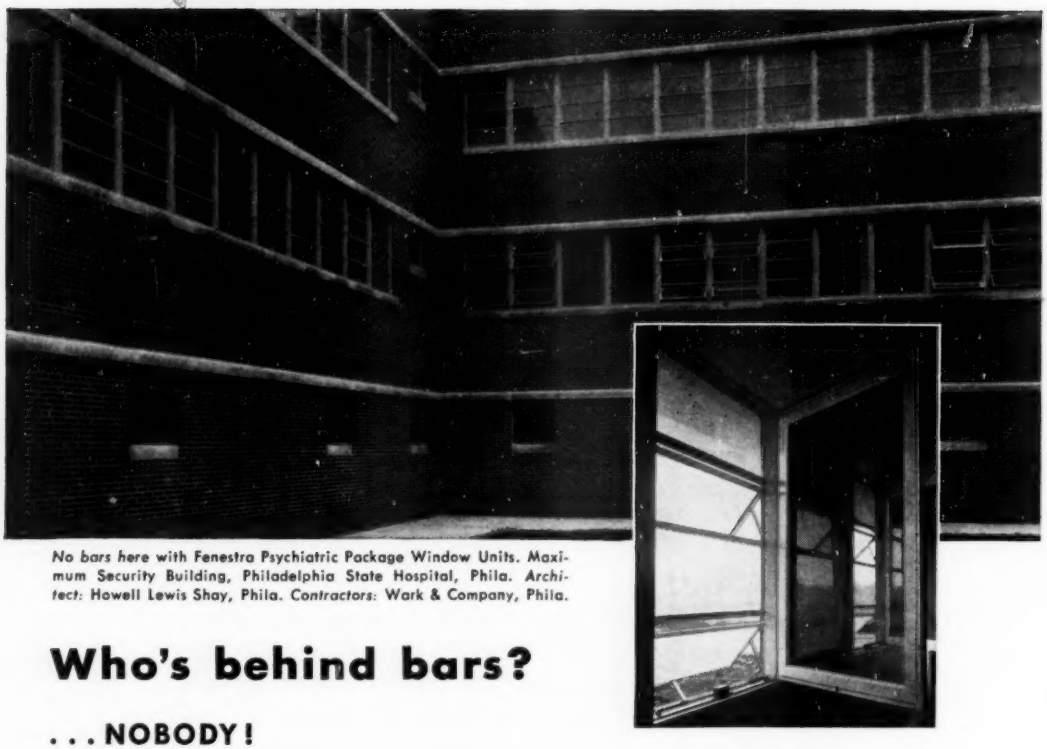

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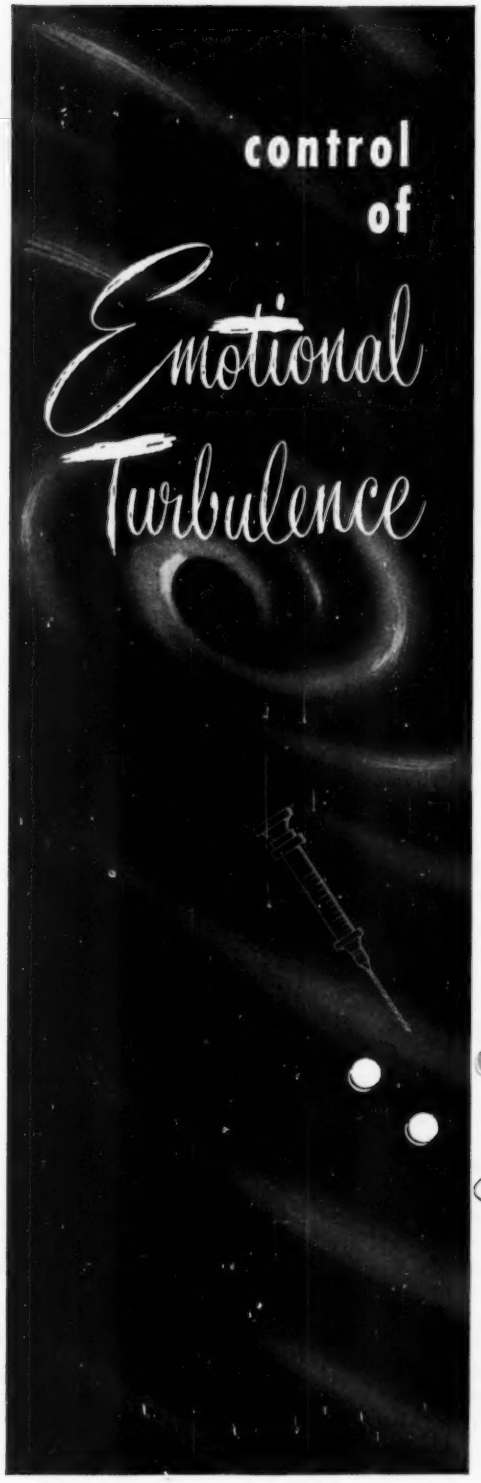

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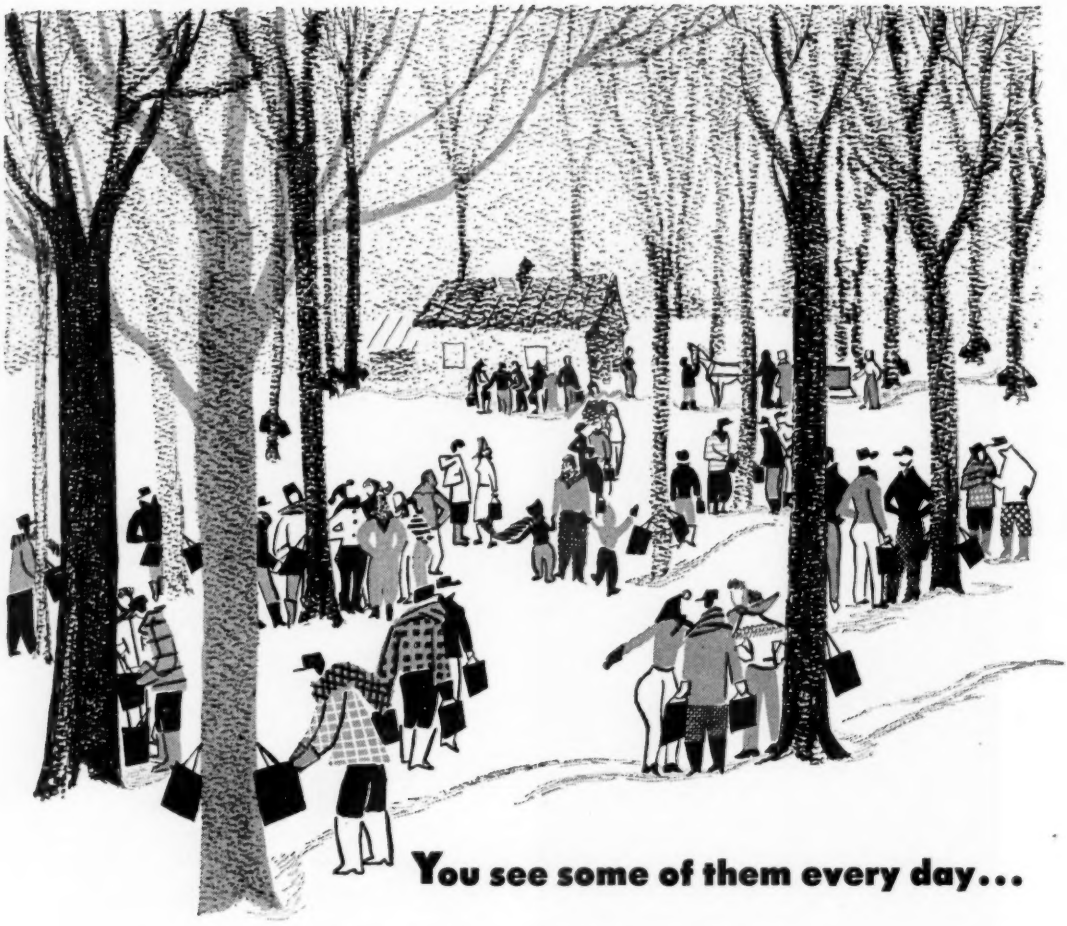

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1. THOMPSON, L. J. AND PROCTOR, R. C.:
North Carolina Medical Journal, Sept., 1953.

2. LEVY, S.:
Journal of the American Medical Association, Dec. 5, 1953.

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LETTER FROM JAPAN

TSUNEO MURAMATSU, M. D.,[1] NAGOYA; ROBERT J. LIFTON, M. D.,[2] NEW YORK CITY; AND TAKEO DOI, M. D.,[3] TOKYO

Despite an increasing interest in "dynamic" factors brought about by the postwar American influence, the prevailing approach and major focus of Japanese psychiatry remains essentially organic. Studies in central nervous system anatomy, pathology, physiology, and biochemistry, which constitute major fields of interest, are still considered to fall within the over-all province of psychiatry, and Japanese workers in these disciplines have made significant contributions to the literature within the past 50 years. This exclusively organic or constitutional outlook, however, with the more recent consideration of environmental factors, is being gradually replaced by a developing eclecticism, within the limits of which there exists considerable variation in thought and approach.

Modern Japanese psychiatry, like other medical specialities, has an essentially German heritage. This stems primarily from the training of Japanese physcians, who were later to become leaders in the psychiatric field, in German and Austrian clinics; notably Dr. Shuzo Kure, one of the early professors of psychiatry at Tokyo University, who studied under Kraeplin and Nissl. Under this predominantly German, and, to a lesser extent, French influence, Japanese psychiatry developed a keen interest in nosology and detailed description of symptomatology, becoming particularly concerned with the psychoses and research into their organic aspects. Freudian concepts were introduced largely through the teachings of Dr. Kiyoyasu Marui, then professor of psychiatry at Tohoku University, Sendai, more than 30 years ago; but have generally been unpopular, and have received little acceptance at most psychiatric centers. There has been a recent revival of interest in psychoanalytic theory, however, most evident among younger psychiatrists.

At the fiftieth annual meeting of the Japanese Association of Psychiatry and Neurology, held in Sendai in May 1953, Dr. Seizo Katusnuma, president of Nagoya National University, and former professor of internal medicine; and Dr. Yushi Uchimura, professor of psychiatry of Tokyo University Medical College, delivered keynote addresses in which they discussed these historical factors as well as current trends in Japanese neurology and psychiatry respectively.

At that time, Dr. Uchimura enumerated the most important Japanese studies during the past 50 years, including: "Iron Reaction in Brains of Progressive Paralysis" (1913), by Dr. Dorin Hayashi; "Recent Studies on the Choroid Plexus" (1921), by Dr. Sadamichi Kitabayashi; "On Steinach's Operation" (1921, 1923), by Dr. Yasusaburo Sakaki; and more recently; "A Method of Electric Convulsive Treatment," by Dr. Goro Yasukochi (1939); "Psychotherapy of Shinkeishitsu" (Nervousness), by Dr. Shoma Morita; "Psychiatric Studies of the Ainu, Particularly Imu," by Yushi Uchimura, *et al.*; "On the Characteristics of Japanese Aphasia," by Dr. Kinnosuke Miura and Dr. Tsuneo Imura; "Criminal Biology and the Twin Method," Dr. Shufu Yoshimasu; "Metabolism of Schizophrenia," by Dr. Dorin Hayashi; and "Cerebral Pathology Caused by the Atomic Bomb," by Uchimura, *et al.*

Among these, Uchimura's Ainu Studies, because of their dynamic and anthropological implications, may be of particular interest to American readers. The term "Imu," in this paper, refers to a fear reaction found chiefly among the women of the Ainu (a near-extinct race among the original inhabitants of Japan, now found only in Northern Japan). This phenomenon had been previously described by other Japanese authors, but

[1] Professor of Neuropsychiatry, Nagoya National University School of Medicine, President of the Japanese Association of Psychiatry and Neurology for 1953-54. Corresponding member of The American Psychiatric Association.

[2] Former Psychiatrist, USAF Hospital, Tachikawa, Japan.

[3] Neuropsychiatric Division, Tokyo University Medical College, former Fellow of the Menninger Clinic, Topeka, Kansas.

Uchimura and his group made a particularly comprehensive study in which they stated:

> It [Imu] consists of agitated movement, echolalia, echopraxia, automatic obedience, catalepsy, and impulsive activity. . . . The reaction is temporary and is in most cases precipitated by seeing a snake or hearing the word "snake." . . . It is believed that this is an hysterical reaction, although it can be contended that this reaction is far more primitive than ordinary hysteria. . . . Therefore, Imu may be considered to be the archetype of hysteria.

The potentially fruitful interpretation of psychodynamic mechanisms was not explored in this monograph.

The average Japanese academic psychiatric clinic is headed by a professor whose background had been essentially in an organic field, such as neuropathology. A considerable aura surrounds the professor, and there is a somewhat more distant relationship between the teachers and their students than is found in most American clinics. There is no formal residency program; those who seek speciality training serve as full-time physicians on the psychiatric service for a variable number of years after which they generally receive teaching appointments or positions on the staffs of other mental hospitals. There is little in the way of office practice, with psychiatric work mostly confined to hospitals, including national, prefectural, municipal, university, and private institutions. As in most other countries, there is a tremendous shortage of mental hospital beds, and great problems exist in maintaining adequate facilities and personnel for the care of patients.

Psychiatrists, for the most part, do not work with clinical psychologists or social workers. These latter two disciplines exist in Japan but are relatively new and are not closely affiliated with medical centers. Psychologists at clinics have been, until recently, working primarily with intelligence tests, but are now beginning to manifest considerable interest in projective techniques. As evidence of this, there have recently appeared several attempts to standardize both the Thematic Apperception and Rorschach tests for Japanese subjects. An exception to this trend of lack of integration of these disciplines is the clinic at Nagoya National University School of Medicine, where a more environmental and dynamics approach prevails, with utilization of social workers and clinical psychologists. This "holistic" orientation, which includes also consideration of constitutional and biological factors, was developed by one of the writers of this letter [4] and described by him in a paper delivered at the recent annual meeting. The expanding program at Nagoya has been helped considerably by a grant from the Rockefeller Foundation.

The great majority of the papers delivered at the meeting of the Japanese Association of Psychiatry and Neurology were concerned with organic research including a special seminar on the diencephalon and midbrain. One of the most important and original papers was a neurosurgical report by Narabayashi and Okuma of Tokyo University on "Procaine Oil Blocking of the Globus Pallidus for the Treatment of Rigidity and Tremor of Parkinsonism." The authors have impressively demonstrated their results to groups of American military physicians and will soon publish their paper in an American neuropsychiatric journal. Others in this group that were especially interesting were Inose and Yokoi's "Pathology of Cerebral Arteriosclerosis," Kamimura's "An Experimental Study of Motor Reactions Produced by Stimulation of the Diencephalon," and "Ventriculoscopy with an Original Instrument," by Takayoshi Nomura.

A symposium on psychoneurosis was also held, and theoretical reports were presented representing concepts of French, German, American, and other schools. It is in the approach to the neuroses that the tremendous variation in orientation of Japanese psychiatrists is most in evidence with papers running the etiological gamut from an essentially constitutional point of view to consideration of abstract psychoanalytic theories. Relatively few of the papers on neurosis dealt with actual case studies.

A notable exception was the "Study of Personality Development by the Twin Method," by Dr. Keizo Okada, director of the Department of Eugenics of the National Institute of Mental Health, where one of the authors [4] serves as a research consultant. Dr. Okada, working with members of the Institute for Brain Research, Tokyo University, followed the personality development of 9 pairs of monozygotic twins over a 10-year

[4] Muramatsu.

period. He noted that, despite many similarities, there was considerable variation in personality trends within each of the pairs studied, depending upon relationships with parents and parent figures, as well as other dynamically important environmental factors.

It is also significant that such topics as psychological factors during the menstrual cycle, suicide as a conflict reaction, and observation on group neurosis were dealt with, reflecting the increasing interest of Japanese psychiatrists in the application of dynamic concepts.

Importation of American ideas has been brought about by books and articles, joint meetings with American military psychiatrists, and the few Japanese psychiatrists who have obtained training in American clinics. Japanese translations of works by Karl Menninger, Erich Fromm, Lawrence Kubie, and Karen Horney, in addition to those of Freud, are beginning to be read; and most psychiatrists can read English, as well as German, sufficiently well to study original books and papers in these languages. Japanese and American psychiatrists have obtained mutual benefit from both formal meetings and informal exchange, with Japanese-American Neuropsychiatric Societies now thriving in both Fukuoka and Tokyo.

One of the authors [4] who has been particularly interested in crosscultural studies, has been in communication with leading American and Canadian psychiatrists concerning this type of research, and has suggested the formation of a liaison group between the American and Japanese Psychiatric Societies, for the purposes of mutual exchange of information and cooperative research ventures. At the present time, George DeVos, an American clinical psychologist, is working at the Nagoya clinic as a Fulbright Research Scholar, on a project involving comparative psychological testing of Japanese individuals in America and in Japan. In addition to this, one of the authors [5] was the first American to attend an annual meeting of the Japanese Association of Psychiatry and Neurology, with his two colleagues serving as faithful interpreters.

In its attempt to absorb dynamic concepts, Japanese psychiatry is handicapped by the very small number of individuals here who have significant training and experience in working with this orientation. This problem is being partially met by the influence of those who have studied in American and European clinics, but there remains a great need for trained teachers of dynamic psychiatry.

Thus, Japanese psychiatry at the present time must be considered to be in a state of flux. The recent influence of American dynamic psychiatry is beginning to make a slight dent in the firm foundations of the previously existing predominantly organic heritage. Although this has resulted in some confusion, it may be considered to be an integrative process, from which a more flexible and inclusive brand of Japanese psychiatry will undoubtedly ultimately emerge.

[5] Lifton.

THE HISTORY OF THE FOUNDING OF THE EASTERN STATE HOSPITAL OF VIRGINIA

GRANVILLE L. JONES, M. D.,[1] WILLIAMSBURG, VA.

After 180 years of existence on the original site the oldest state mental hospital in the country is in the process of removal to a new location. Founded in Williamsburg, the then Colonial Capitol of Virginia, by an Act passed by the House of Burgesses in 1769 the "Publick Hospital for Persons of Insane and Disordered Minds" opened its doors on October 12, 1773. Although there had been wards or buildings for the mentally ill attached to general hospitals (in Philadelphia, for example), the hospital in Williamsburg was the first public institution solely for the care of such patients. At this time when the oldest is about to become the newest mental hospital in the country, it seems fitting to review the circumstances of its inception.

On November 6, 1766 Francis Fauquier, the Royal Governor, recommended to the General Assembly that some provision be made for the care and treatment of the insane. He said:

> It is expedient that I should also recommend it to your consideration and humanity a poor unhappy set of people who are deprived of their senses and wander about the country terrifying the rest of their fellow creatures. A legal confinement and proper provision ought to be appointed for these miserable objects who cannot help themselves. Every civilized country has a hospital for these people where they are confined, maintained and attended by able physicians to endeavor to restore them to their lost reason.

Fauquier had to renew his request the following year. After reminding the legislators that they had passed a resolution to establish a hospital but that nothing further was done about it, he said, "It was a measure which I think could offend no party, in which I was in hopes humanity would have dictated to every man as soon as he was acquainted with the call for it." True enough, the House of Burgesses was greatly concerned with the general subject of the relationship of the colonies to Mother England, and perhaps the great and far-reaching implications of this relationship pushed other subjects out of their minds. Nevertheless, it seems significant that the Governor despite these other matters of major importance persisted in what he felt was an ethical duty of the government to perform. While there were many others in the Colony whose names are perhaps more familiar than his, and whose interest in mankind cannot be doubted, the evidence seems quite convincing that it was indeed Fauquier's original idea to establish a hospital.

Francis Fauquier was born in England in 1704, the eldest son of a physician, Dr. John Francis Fauquier. He was distinguished for his learning and, like so many of his contemporaries both in England and in the colonies, was accomplished in many diverse fields. He was a director of the South Sea Company and his interest and ability in public affairs was evidenced not only by his appointment as Governor in 1758 of the richest and most powerful of the American colonies, but also by the fact that in 1757 he wrote a paper on "The Ways and Means of Raising Money for the Support of the Present War without Increasing the Public Debt." It is also noted that as Governor of Virginia he advised Prime Minister Pitt against the taxes which Parliament was considering to finance the Seven Years War and in particular he objected to the Stamp Act. He was also on the popular side of the controversy concerning the Parsons' Causes. After the close of the French and Indian War (the American phase of the Seven Years War), he turned his attention to improving conditions in Virginia. Fauquier's interest in natural sciences was great. He was a member of the Royal Society and his article on hailstones observed in Virginia in 1758 was read by his brother William to the Society after Francis' death. The opinion is expressed by Tyler that:

> The explanation of this sympathetic attitude of Fauquier is to be found in his devotion to scientific studies, which were antagonistic to dogmas of all kinds—religious or governmental. He delighted in the company of Dr. William Small, the professor of natural philosophy at William and Mary, and at

[1] Superintendent, Eastern State Hospital.

his table the youthful Jefferson, Page, Walter, McClurg and others of the Virginia youth learned their lessons in the Rights of Man.

Francis Fauquier's will, which is recorded in the Court House in Yorktown, Virginia, gives significant glimpses into his personality and social conscience. He provided that an autopsy should be done on his body, that it

> . . . be Deposited in the Earth or Sea as I shall happen to fall, without any vain Funeral Pomp and as little expense as Decency can possibly permit, Funeral Obsequies as it has long appeared to me being contrary to the Spirit of Religion of our Blessed Saviour.

Referring to his slaves he described them as

> . . . a part of my Estate in its nature disagreeable to me, but which my situation made necessary for me; the disposal of which has constantly given me uneasiness whenever the thought has occurred to me. I hope I shall be found to have been a Merciful Master to them and that no one of them will rise up in Judgement against me in that great day when all my actions will be exposed to public view. For with what face can I expect Mercy from an offended God, if I have not myself shown mercy to those dependent on me. [He proceeds to provide that as far as possible his slaves] shall have liberty to choose their own Master and that the Women and their children shall not be parted.

This, it should be pointed out, was written in 1767, almost a hundred years before the final freeing of the slaves in the United States, by a man whose public position required him to live in almost regal splendor as the head of a colony largely owned and controlled by aristocrats.

The "Age of Enlightenment," as Kant called it, roughly coincides with the 18th Century. Between the devastation of the dynastic wars in Europe, which left the continent exhausted, and the beginning of the social revolutions initiated by the French in 1789, there was a general change in the economic, political, intellectual, and artistic life of the western world, which ended for once and all the arbitrary power exercised for so many centuries by an autocratic church and the feudal aristocracy. The vision of enlightenment (to quote from "The History of Western Man") was "freedom—freedom from superstition, freedom from intolerance, freedom to know (for knowledge was held to be the ultimate power), freedom from the arbitrary authority of church or state, freedom to trade or work without vestigial feudal restrictions." Dorn says:

> Everywhere from Scandinavia to the Pyrenees, from England to Switzerland there was the same pervasive appeal to the autonomy of human reason, the belief in perfectibility and progress; everywhere the same tranquil confidence in the capacity of untrammeled reason to discover by means of the new doctrine of causality universally valid principles governing nature, man and society; everywhere the same negation, now radical, now timid, of supernatural revelation, the same determined assault on all authority based on this revelation. Everywhere the same optimistic belief in the cosmopolitan solidarity of all enlightened intellectuals and a virile disgust with nationalism in the realms of thought and institutions.

It has been said that this was the most illustrious period of the aristocrat as well as the last, and the era was remarkable for the versatility of so many. Interest in the scientific process and the natural sciences became the fashion and since it was before the age of specialism, the educated gentleman knew something of mathematics, of physics, of the new science of chemistry, of biology, and was not reluctant to have an opinion in the art and science of medicine. The scepticism that characterized the rising interest in science was carried over into the field of religion, politics, and social customs; and the theory of the rights and dignity of the common man became popular and respectable. Perhaps it can be said that the basis of the intellectual and the cultural changes characteristic of this 18th Century period was Newton's new analytic procedures. He discarded *a priori* speculation for the study and analysis of observed facts. Reason instead of being a labored attempt to explain phenomena in terms of fixed religious, social, and political ideas then became a method of acquiring knowledge. This reached its full fruition principally in France, where Montesquieu, Voltaire, and their contemporaries developed the two movements, the Encyclopedists and the Physiocrats. However, the movement diffused to England and the American colonies as well, and Philadelphia was one of the centers of the enlightenment. This was a prosperous era and there was a remarkable spread of culture by travelers. It is told that someone remarked to Gibbon that at one time toward the end of the 18th Century 40,000 Englishmen were living or touring on the continent! The compart-

mentation of individual cultures was breaking up.

This, then, was the atmosphere in which Fauquier was born and educated. It is easy to understand how he could carry into his political life the ideas which he no doubt drew from David Hume, John Locke, Gibbon, Samuel Johnson, Pope, Walpole and Pitt, although how much personal contact he had with these men is not clearly a matter of record. That he was exposed to their ideas there can be no doubt.

Aside from his part in the establishment of the hospital, it might be interesting to quote from Thomas Jefferson as to the part Fauquier played in his education. While at the College of William and Mary, Jefferson wrote that he had the

> . . . great good fortune and what probably fixed the destinies of my life that Dr. William Small of Scotland was then professor of mathematics, a man profound in most of the useful branches of science with a happy talent of communication, correct and gentlemanly manners and an enlarged and liberal mind. [Dr. Small was instrumental in introducing him] to the acquaintance and familiar table of Governor Fauquier, the ablest man who had ever filled that office. With him and at his table Dr. Small and Mr. Wythe, his *amici omnium horarum,* and myself formed a *partie quarree,* and to the habitual conversations on these occasions I owed much instruction. At these dinners I have heard more good sense, more rational and philosophical conversations than in all my life besides. They were truly Attic societies. The Governor was musical also and a good performer and associated me with two or three other amateurs in his weekly concerts.

It was one of the ironies of fate that Governor Fauquier, through whose personal efforts the legislation establishing the hospital was adopted and executed, did not live to see the accomplishment of his wish. He died on March 3, 1768. In November 1769 the House of Burgesses created a committee for the purpose of drawing up a bill, which was approved the same month and enacted into law in June 1770.

The law of 1770 contains some rather interesting parts. It begins:

> Whereas several persons of insane and disordered minds have been frequently found wandering in different parts of the Colony and no certain provision having yet been made either towards effecting a cure of those whose cases have not yet become desperate nor for restraining others who may be dangerous to Society: be it therefore enacted by the authority of the same that the Honorable John Blair, William Nelson, Thomas Nelson, Robert Carter Nicholas, John Randolph, Benjamin Waller, John Blair, Jr., George Thomas Everard, and John Tazewell, Esq. be and they are hereby constituted trustees for founding and establishing a publick hospital for the reception of such persons as shall from time to time, according to rules and orders established by this act, be sent thereto, and the said trustees shall be called and known by the name and style of the Court of Directors of the Publick Hospital for Persons of Insane and Disordered Minds.

The act proceeds to set out rules and procedure, means of filling vacancies and selecting officers, and

> . . . that the said Court of Directors be and they are hereby empowered to purchase a piece or a parcel of land not exceeding four acres, the most healthy in situation that can be procured and as convenient as may be to the City of Williamsburg, and to contract for the building thereon a commodious house or houses fit for the reception and accommodation of such disordered persons as are described by this act, and to provide a proper keeper and matron of the said hospital with necessary nurses and guards, and as occasion may require, to call in any physicians or surgeons for the assistance in relief of such poor patients.

The act also describes the method of sending patients to the hospital. It provided for the assembling of three magistrates who "may examine the said person supposed to be disordered in his or her senses and take such evidence in writing, touching his or her insanity and the causes of it as they can procure." No mention is made of medical testimony—the commitment was entirely by laymen.

It is interesting to us who are concerned with the construction of hospitals that the first appropriation "for the purchase of land, building the hospital and other incidental expenses" was the sum of 1,200 pounds, and it is furthermore provided that a "sum not exceeding 25 pounds per annum is provided for each person in the hospital." A provision is also contained requiring the payment of this support from the patient's estate if it was sufficient.

Another paragraph of the act provides that if a patient "shall recover his or her perfect senses so that he or she in the opinion of the Court of Directors may be safely released, it shall and may be lawful for the said Court to discharge such person, giving him or her a

proper certificate thereof." Here again the law conspicuously omits reference to the medical profession.

The names mentioned in the law of 1770 include some of the most prominent people of the colony. Thomas Nelson was one of the signers of the Declaration of Independence and was a Governor of Virginia. Peyton Randolph was president of the First Continental Congress. Robert Carter Nicholas was a member of the General Assembly of Virginia at that time. George Wythe, whose name is listed in the first Minutes of the Court of Directors, was also a signer of the Declaration of Independence and professor of law at the College of William and Mary. The others, while not perhaps as prominent, were certainly gentlemen of high accomplishment and their names are found in connection with many other historical matters.

The Court of Directors acquired 8 lots on Francis Street in Williamsburg, and engaged Robert Smith of Philadelphia as the architect to design the building. The original structure was a 2-story building 100 feet by 32 feet 2 inches.

> [It had] a hall for a staircase, behind there is the keeper's apartment and 12 other rooms chiefly for the reception of mad people. The stairs begin near the front door and lands on a passage in the second-story. The second-story has 12 rooms the same dimensions as those in the first-story and a room over the keeper's apartment which serves the managers of the hospital to meet, or may be divided, which will make two other rooms for patients.

The patients' rooms were 11 feet 9 inches by 10 feet 9 inches, or a little over 126 square feet. This certainly compares favorably with our modern space standards—the requirement for a single room in Virginia is 80 square feet, plus 10 feet of dayroom space.

Apparently the planning was not too well done—it was necessary to go back for another 800 pounds; partly for the building, partly for a wall to enclose a yard "for the patients to take the air," and partly for "necessary buildings." This was before the day of indoor plumbing.

On September 14, 1773, the Minutes of the Court of Directors contain the following entry:

> The President acquaints the Courts, he had called this meeting in consequence of his having received information that the hospital was now compleated: whereupon the Court proceeded to examine the said hospital and finding it finished according to agreement, the same was received of Benjamin Powell, the undertaker. [The "undertaker" was the contractor in our usage.]

It was ordered advertised that the hospital would be ready by October 12 for the reception of patients, and accordingly on that day two patients were admitted, one Zachariah Mallory from the County of Hanover and Catherine Harvey from the County of New Kent. In the minutes of that meeting it is also recorded that the keeper of the hospital, James Galt, who had been appointed at the September meeting, "called on Dr. John D. DeSiqueyra to visit such persons as shall be brought to the hospital on their first reception and at such times as may be necessary."

The plan of the hospital of having a lay "keeper" and a visiting physician was no doubt the custom of the day and was continued until 1841. It is somewhat ironical that the first title of the institution was a "Hospital" and in 1841 when the law was changed to require a medical superintendent the same act provided for the changing of the name to the "Eastern Lunatic Asylum." It bore this name until 1894, when it was designated the "Eastern State Hospital," as it is now known.

James Galt, the keeper, was the first of his family to be associated in an official capacity with the hospital. While he had none of the technical training, which we would consider essential today for the position as administrator of a hospital, he was a well-educated man, had traveled much and was considered to be a person of high integrity. His wife, Mary, was the matron. During the Revolutionary War the hospital was suspended for a short time for the lack of funds and James Galt was a lieutenant in the Williamsburg Militia. When the hospital was reopened at the close of the war, James Galt was again appointed keeper and held this position until 1800. He was succeeded by his son, William T. Galt, who held the position for 26 years until his death. It might be noted that William T. Galt was Mayor of Williamsburg when Lafayette made his second visit to America and received him officially when he visited the old capital.

Dr. John Minson Galt (the first) was ap-

pointed visiting physician after the death of Dr. DeSiqueyra and served in this capacity from March 31, 1795, until his death in 1808. He was the younger brother of James Galt, the keeper. He also served as a member of the Court of Directors from June 25, 1799, until his death.

After the death of William T. Galt his son Dickie Galt became keeper and served for ten years. In the meanwhile Dr. Alexander D. Galt, son of the first John Minson, served as visiting physician from January 7, 1800, until April 24, 1841. It was at that time that legislation changing the name of the institution and the requirements for the principal officer was put into effect. The Court of Directors had in mind appointing John Minson Galt (the second) as superintendent, but since he had not yet graduated from medical school, his father was appointed as acting superintendent and served in this capacity from April 24 to July 1.

John Minson Galt (the second), took office on July 1, 1841, served until May 6, 1862. At this time a Pennsylvania Calvary Regiment occupied Williamsburg and a Lt. Col. Wager, their medical officer, took the hospital over. Dr. Galt died, probably of a coronary heart attack, a few days later.

The record of the Galts, who held some official connection with the hospital, usually as chief executive officer, for some 89 years, is approached by that of the Tuke Family in the York Retreat, but is otherwise quite unparalleled in the history of mental hospitals.

John M. Galt (the first) obtained his academic education at the College of William and Mary and his medical education in Edinburgh and Paris in 1765 to 1767. His son, Alexander D., also attended the College of William and Mary and Oxford. He was also a private pupil of Sir Astley Cooper and studied medicine in the London Hospital from 1792 to 1794.

John M. Galt (the second), who was one of the 13 founders of The American Psychiatric Association, also attended the College of William and Mary, and obtained his medical education in Philadelphia. He is described by Overholser in the Centennial Anniversary Issue of The American Journal of Psychiatry as probably the most scholarly of the 13 founders. He spoke and understood some 20 languages, was an avid reader of the literature bearing on the care of the mentally ill and, in 1846, published "The Treatment of Insanity," which was a compendium of authoritative books, articles and other documents from all over the United States and Europe. He also wrote numerous articles for the official magazine of the Association. In these and in his annual reports one obtains a fascinating and graphic description of the practice of his period. He believed strongly in occupation, in recreation, entertainment, social activities and bibliotherapy. He was a pioneer in music therapy and conducted a program of academic education for his patients. These various activities he considered to be "the moral treatment" of the insane, although one gets the impression that he had developed and extended the original concept of "the moral treatment" somewhat further than most advocates of this school of therapy.

In order to understand the psychiatric thought of the 18th Century, it will be helpful to review some of the general medical concepts. While the 18th Century was a period in which scientific thought was making phenomenal progress, there was a definite lag in so far as medical practice was concerned. The practice of medicine, which had to a large extent been stifled by the authoritarianism of the Middle Ages, was in the state of resurgence and experimentation with some physicians going back to Hippocratic thought, others adhering to Galen, and others attempting to apply the newly discovered knowledge of physics and chemistry. There was much being learned in anatomy and some pioneers were beginning to apply the findings of the autopsy table to the clinical practice. However, the leaders in English medicine at the time were holding on to some rather primitive ideas.

Probably the most popular theories of the first part of the Century were those of Thomas Sydenham. Sydenham's theory of medicine was the humoral. He thought that disease was caused by the introduction of injurious substances, in the air largely, or to the retention of the natural humors, which became fermented and putrefied. The cure of disease was therefore logically the expulsion of morbific matter through the sweat,

the stools, vomiting, and bleeding. Boerhaave was a little more eclectic and perhaps closer to modern pathology, but he also was inclined to the humoral philosophy. He believed that disease was "an imbalance of natural activities," recognized that fever was nature's effort to correct the situation, described inflammation as the mechanical obstruction of the capillaries and understood to some extent the mechanical principles of the processes of digestion and circulation. From there, however, he became (in modern opinion) somewhat more fantastic. He recognized three diatheses—salt, putrid, and oily—and his therapy was the debilitating use of phlebotomy and purges, for the purpose of sweetening the acid, purifying the stomach, and abolishing impurities.

William Cullen, under whom many Virginia physicians studied in Edinburgh, was another of the outstanding physicians of the century. He practiced and preached the system known as "solidism," referring to the solid parts of the body and in which disturbance of the nerves produced spasm, atony, and "acrimony of the humors." He was greatly concerned with the classification of disease and was largely responsible for a very elaborate classification. His therapeutics was more simple than most others of the day and he was opposed to the practice of bleeding.

The most significant point, which has already been mentioned, in our understanding of psychiatric practice of the day was the lag between the newly popular scientific concept and its technological application to medicine and psychiatry. The physicians of the time, particularly in the Colony of Virginia, were devoted to theory—theory based mainly on what the masters of the profession had proclaimed. They had not yet come to the point of the ancient story—the one in which the Wise Men were debating how many teeth a horse had (there was a discrepancy in what some ancient philosophers had stated), and the matter was settled by an ignorant peasant, who looked in the horse's mouth and counted the teeth. Here and there both in Europe and America some pioneers were studying, observing, dissecting, and experimenting with therapeutics, but it would take another century before modern medicine, based on pathology, bacteriology biochemistry, and physiology, would prevail.

We have noted how in the founding of the hospital in Williamsburg the control of the institution was in the hands of laymen. Commitment, admission, and discharge were not managed by physicians and it is rather doubtful from the old records that the visiting doctors had much to do with the treatment of the mental illness. This is consistent with the philosophy of the day. The mentally ill were at long last being handled by civil authorities and not by the clerical, but the physician still felt hopeless in the face of these conditions. Nonmedical philosophers were concerning themselves with abnormal mental manifestations and some were coming close to our modern theories. The physicians who were giving thought to this field were mainly organically minded. They were attempting to explain mental aberrations on recognizable pathology in the brain, the heart, the liver, stomach, bowels, and so forth.

With few exceptions a physician treating a mentally ill person was concerned mainly with general management—the *regimen* rather than specific therapy. Such therapy as was mentioned was based mainly on the theories of Sydenham, Cullen, and others. For example, in Galt's *Treatment of Insanity* he quotes from Dr. Richard Mead in 1763. Several cases are described in which evacuation, emetics, diuretics were advised and the theory of opposites in the management seems to be stressed, such as "keep patient's mind fixed on thoughts directly contrary to disease . . . conduct to be suited to their disposition, composing the melancholy and depressing the merry." He advises that the unruly be bound but does deplore blows and stripes. He suggests bodily exercise, walking, riding, playing at ball, bowls, and other like diversions, swimming and traveling, and advises against the persistent use of anodynes "for even if sleep is procured, the patient awakes with his head filled with more terrifying ideas than before."

In a book by William Cullen, Galt found that restraint was advised for mania. "Strait waistcoat vest, should never be in a horizontal position. Confinement and as great freedom as possible from all objects of sight and sound." He advises bleeding, blisters, "opium

in large doses," and laxatives. For melancholia he advises purgatives and warm bathing as contrasted with cold. He does not advise opiates and suggests that if the cause is known, treat that and thus remove the disease.

Quoting from Saunders' *Elements of the Factors of Physics* dated 1790 we again find bleeding, emetics and purgatives and opiates, with the logical but somewhat impracticable advice "mind to be kept serene and cheerful."

Some of Galt's references are even more startling. He quotes from Browne that a patient "is to be kept free from all commotion of thought or feeling but to be struck with fear and terror and driven to despair. Labor of draught cattle to be imposed on him and assiduously continued. Diet as poor as possible, drink only water. To be immersed in water as cold as possible and kept under it, covered all over, for a long time until he is near killed."

Erasmus Darwin, also quoted by Galt, in his 1797 Philadelphia edition says that for mania "venesection, vomits, opium and gentle purges were useful and in hypochrondriasis the use of a blister, opium, rubarb and no liquor stronger than small beer or wine and water. Gentle exercise on horseback uniformly persisted in."

Blanton's *Medicine in Virginia in the 18th Century* describes the case of an epileptic Negro treated by Dr. James Greenhill in 1764. The slave was bled, vomited, and purged and "all of this seemed to do no good." He therefore gave him some shocks from an electric machine and raised a blister on the scalp behind the occiput. "This succeeded and the next change of the moon expecting the fit as usual he missed them. The medicine has been continued and he has missed the fits this last full moon again. The blister is almost dry but I intend if the fellow stays with me to draw a fresh one. It is something remarkable that the fits has usually returned when the moon was in the sign Capricorn, even when it was a week before or after the full or change."

All of this time the leaders in the Enlightenment, most of whom were not physicians, were formulating the concepts of the rights and dignity of the individual, the importance of experimentation and proof, the theory that man in the mass could and would ordinarily be right and (the central theme of the Enlightenment) that there was no problem which could not be solved if intelligence was brought to bear upon it. The sum of these concepts would be the groundwork for the "moral treatment of insanity," which was to come to prominence at the end of the 18th and the beginning of the 19th Centuries. For so many centuries the care of the mentally ill had been left to the theologians, but now they were generally the responsibility of civil authorities just as criminals were. There was considerable feeling, as a matter of fact, that there was little difference between the punitive confinement of the criminal and the preventive confinement of the insane. The "able physicians" referred to by Governor Fauquier were few and far between and his proposal for a "hospital" was largely an expression of his idealism and hope. We have no reason to believe that the care of the mentally ill during the first few decades of the Williamsburg Hospital was any worse or any better than in Bethlehem or the Philadelphia General Hospital, where we know that chains and shackles were freely used. The attending physicians in Williamsburg were well trained and highly skilled for their times and were no doubt thoughtful, sincere and sympathetic, but from the sources available we cannot assume anything but the customary practice of the day. The important thing is the philosophy of its founding. The name given it and the character of the governing board, the administrator, and the attending physicians all point to a vision and a hope for the future.

DYSPLASTIC GROWTH DIFFERENTIALS IN PATIENTS WITH PSYCHIATRIC DISORDERS: ASSESSMENT OF THE PROFILE OF EMOTIONAL IMMATURITY[1]

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Most concepts germane to psychiatry which are susceptible to change are geared to factors of growth and development. Intelligence(37), personality(2, 25, 30), body weight(7, 24), immunity to disease(18, 28, 32, 36), dynamic psychomotor activity(4, 9, 38), awareness(8, 10, 16), morphological and constitutional configuration(1, 3, 23, 29), and even nosology are examples of factors significantly saturated with the variable of maturation and liable to be associated with psychiatric symptomatology when their developmental potential falls out of phase with the advance of chronological age.

In the field of emotional development, immaturity is a term widely employed in descriptions of patients with psychopathic personality(19, 31), psychoneurosis(27), schizophrenia(20) and other psychiatric syndromes(26); it is a premise common to nearly all theories of dynamic psychology, including psychoanalysis; it has even been taken to represent a variety of psychiatric disorder of itself(33, 35). Yet there exists no unanimity of opinion among those clinicians who oft-times employ the term descriptively, and there exists no instrument comparable with those yielding estimates of intelligence which is capable of quantifying the attributes of emotional immaturity apart from certain procedures applicable only to infants and young children(5, 6, 12, 14, 15, 16, 21, 22, 34).

DEFINITION AND MEASUREMENT OF DIMENSIONS OF EMOTIONAL IMMATURITY

In general terms, emotional immaturity may be defined as the relative fixation or dysplasia of emotional development at a level out of accord with that to be expected at a given chronological age. More specifically various writers have attributed to the concept a number of attributes, each tending to emphasize that aspect having most meaning for him in his experience, and it was evident, in view of such lack of unanimity of opinion, that some preliminary study was necessary before an instrument could be devised to measure the extent and quality of such dysplasia in the individual patient.

In an effort to extract from these varied reports those dimensions showing reasonable agreement among such diverse authorities, 2 measures were employed. A list was prepared after consulting the traits mentioned in the literature and was compared with those elicited as a result of individually interviewing 10 experienced clinical psychiatrists who were asked to describe the traits each associated with patients exhibiting emotional immaturity.

As a result of these twin procedures some 154 traits were enumerated, ranging from generalizations concerned with the richness of the patient's phantasy life down to such minutiae as the ability to create heroes readily. Where a trait was supported by 3 or more writers or clinicians, it was extracted and a second list compiled of "commonly accepted dimensions." From this smaller number of items a final list of 18 dimensions of emotional maturity was prepared (Table 2) and a series of 99 questions devised around them. The number of questions for each dimension was determined arbitrarily, the estimated relative importance of the dimension concerned and the probing necessary adequately to define it, being the principal determining factors. Practically all the questions were drawn from the 154 statements noted previously as describing the various aspects of the concept of emotional immaturity.

The final list was drawn up in questionnaire form and preceded by name and age blanks and some simple instructions as to how to fill it in. The lay-out of the questionnaire and the actual questions asked are given

[1] Read at the 109th annual meeting of The American Psychiatric Association, Los Angeles, Calif., May 4-8, 1953.

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in the Appendix. Care was taken to word the questions in such a way that the immature answer would not always conform to one or other of YES or NO alternatives.

No difficulty was experienced by either controls or undisturbed patients in filling out the form and the test was usually completed in about 15 minutes. In the case of some disturbed psychiatric patients it was necessary for the examiner to read out the questions himself and record the answers given. All other subjects completed the questionnaire without supervision.

The test was scored by adding together the immature answers and expressing this total as a raw or E.I. score. Addition of the immature answers of each of the 18 "dimensions of emotional immaturity" without summation of the total yielded a profile (Fig. 1) against which the relative developmental matrix of the individual or diagnostic group could be compared (Figures 1-3).

THE SUBJECTS OF THE PRESENT STUDY

A total of 623 individuals was sampled. Of these 260 were classified as healthy control subjects and were drawn from army conscripts, physicians, nurses, and hospital secretaries and technicians; there was a large majority of males (236) over females (22) for the reason that all the army group (202) were males. The ages of the controls ranged between 15 and 70 with a mean for the army group of 21.5 years and for the civilians of 30.1 (males) and 24.3 (females) years. The remaining 363 subjects were psychiatric patients and represented a similar dichotomy of sampling. Military sources contributed 126 males cases of psychopathic personality and psychoneurosis while the remainder, including all the psychotics, were drawn from the wards of the Maudsley Hospital, London,

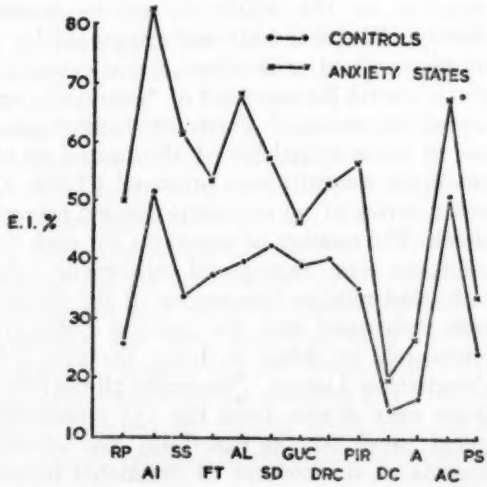

FIG. 1.—Differential profiles of the dimensions of emotional immaturity illustrated as means for the Control and Psychoneurosis—anxiety state, groups of subjects. Ordinates, raw E.I. Score for each dimension; abscissae, the 13 significant dimensions of the E.I. concept. Names of these dimensions are listed in Table 2.

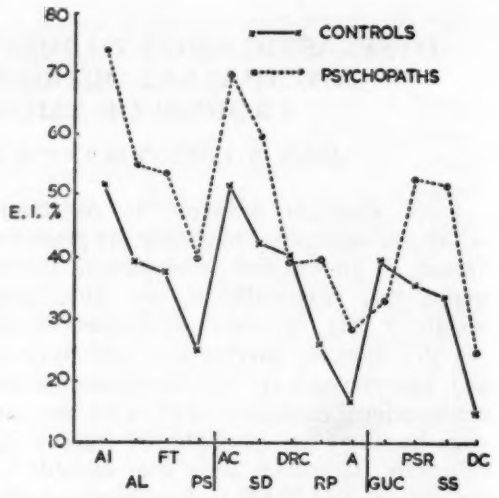

FIG. 2.—Differential E.I. profiles for Control and Psychopathy groups. Details as for Fig. 1.

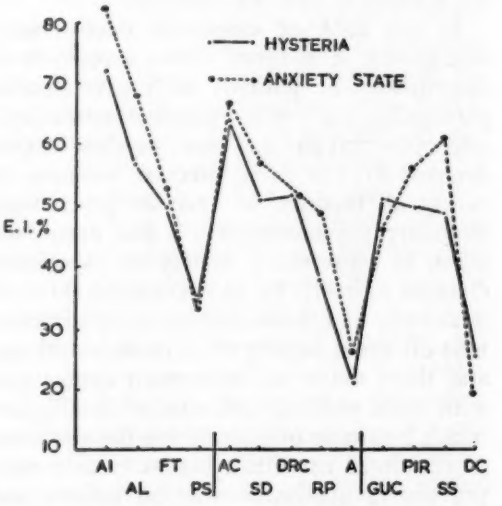

FIG. 3.—Differential E.I. profiles distinguishing 2 types of psychoneurosis. Details as for Fig. 1.

the sex ratio of whom was more evenly distributed (1:1.4). Ages of the patients showed a range similar to those of the controls (15-76 years) but the mean ages were skewed in terms of psychiatric diagnosis, *e.g.*, in accordance with expectation, patients with affective disorder were for the most part older than the patients with hysteria. Five distinct varieties of mental illness were studied, together with a small number of migrainous patients who bridged the gap between the psychiatric and the control groups. Details of the classifications employed and of the background data concerning them can be gleaned from the accompanying tables. For one aspect of the investigation the neurotic group was split into two and the findings in patients with anxiety state differentiated from those with hysteria (Table 2; Fig. 3).

RESULTS: VALIDATION OF THE PROFILE OF EMOTIONAL IMMATURITY

Table 1 indicates that the total raw E.I. scores for 6 diagnostic groups differ significantly from one another, that for the controls showing the least degree of emotional immaturity, that for the migrainous patients falling between the scores of the controls and those of the mentally disturbed patients. Table 2 gives the results of separate analysis of the 18 dimensions of the emotional immaturity concept. It will be seen that 13 of these show significant differentiation between the 4 diagnostic groups analysed. Figure 1

TABLE 1

SCATTER OF THE RAW E.I. SCORE AMONG 6 DIAGNOSTIC GROUPS

Group	N	Mean score	s	Analysis of variance
Healthy controls	260	33.82	10.490	F ratio: 17.762
Migraine	14	37.86	11.922	d.f.: 6 and 616
Psychopathy	65	44.68	19.700	P: <.001
Psychoneurosis	160	46.06	20.290	η^2: 0.147
Affective disorder—depression	59	44.78	7.814	
Schizophrenia	48	45.71	10.560	
Epilepsy	17	43.30	9.668	

TABLE 2

RESULTS OF TESTS OF SIGNIFICANCE TO DETERMINE THE ABILITY OF EACH OF 18 "DIMENSIONS OF EMOTIONAL IMMATURITY" TO DIFFERENTIATE BETWEEN 4 DIAGNOSTIC GROUPS. NOTE THAT THE NUMBER OF QUESTIONS ASKED APPEARS TO REPRESENT A CRITICAL VARIABLE

		Clinical diagnosis groups—mean raw score				Analysis of variance	
				Psychoneurosis (100)			
Dimensions of emotional immaturity	No. questions	Healthy controls (202)	Psychopathic personality (26)	Hysteria (53)	Anxiety state (47)	F ratio	P (d.f. = 3 & 324)
Reality principle	13	3.20	5.04	4.94	6.40	23.406	<.001
Aggression inhibition	4	2.05	2.93	2.89	3.34	15.959	<.001
Self-sufficiency	12	3.92	6.12	5.87	7.26	42.423	<.001
Frustration tolerance	5	1.87	2.66	2.51	2.66	7.133	<.001
Affective lability	8	3.15	4.31	4.57	5.43	24.635	<.001
Self differentiation	5	2.11	2.93	2.53	2.85	5.541	<.001
Grown-up conscience	3	1.18	0.96	1.53	1.38	3.198	.05
Desire to remain a child	6	2.38	2.27	3.09	3.13	6.453	<.001
Narcissism	2	0.81	1.00	0.72	0.68	1.432	N.S.
Diffusion of emotional expression	6	2.53	3.04	2.98	2.60	2.128	N.S.
Interpersonal relationships	8	2.82	4.19	3.96	4.50	13.245	<.001
Dependence capacity	3	0.43	0.73	0.74	0.58	3.809	.01
Passage of time	1	0.17	0.27	0.43	0.62	<1	N.S.
Long-term values	2	1.03	1.27	1.06	1.02	<1	N.S.
Animism	3	0.48	0.81	0.62	0.79	4.040	.01
Abstraction capacity	4	2.05	2.77	2.57	2.66	14.027	<.001
Psychosexuality	11	2.62	4.31	3.76	3.43	13.277	<.001
Oral addiction	2	1.05	1.09	0.93	1.02	2.000	N.S.

contrasts the findings in profile form between the control group and patients with psychoneurosis, anxiety state, indicating those dimensions in which relatively little alteration in maturational differentiation occurs and those in which definite emotional dysplasia exists. In Figures 1-3 only the 13 dimensions showing significant differences are employed, Fig. 2 suggesting that the emotional development of psychopaths is defective in the dimensions of aggression inhibition, affective lability, frustration tolerance, psychosexuality, abstractive capacity, self differentiation, reality principle, animism, interpersonal relationships and self sufficiency, but is relatively in accord with normal development in respect of the desire to remain a child, grown-up conscience, and dependance capacity. Figure 3 compares the profile of 2 types of neurosis and suggests that patients with anxiety state differ from those with hysteria principally in the dimensions of aggression inhibition, interpersonal relationships, the reality principle, and self-sufficiency.

THE INFLUENCE OF AGE AND SEX

Since the concept of emotional immaturity implies relative fixation and dysplasia at some point along the path of development, it is to be expected that chronological age would prove to be a significant variable in its assessment. Similar considerations apply also to the factor of sex. Table 3 shows the results of a 2-way analysis of variance applied to 233 of the civilian group in which the sex ratio was close to unity. Working with the total raw E.I. scores, it demonstrates that the combination of diagnosis and sex accounted for nearly 30% of the variance, diagnosis alone accounting for nearly 20%. The additional variance obtained by the sex variable was statistically significant at the 1% level of confidence.

TABLE 3

DIFFERENTIAL INFLUENCE OF DIAGNOSIS AND OF SEX ON EMOTIONAL IMMATURITY SCORE: RESULTS OF A 2-WAY ANALYSIS OF VARIANCE—CIVILIAN GROUPS

Sex	Psychiatric group	N	Mean E.I. score	Variance	s	Analysis of variance
Male	Healthy controls	27	27.333	57.623	7.591	*F* ratio: 6.858
	Psychopathy	12	44.250	119.295	10.922	
	Psychoneurosis	17	42.118	121.485	11.022	d.f.: 13/219
	Schizophrenia	17	45.177	131.779	11.479	
	Depression	15	39.267	54.067	7.353	P: <.001
	Migraine	4	22.250	18.917	4.349	
	Epilepsy	7	41.143	136.809	11.696	η^2: .289
Female	Healthy controls	22	30.955	54.045	7.352	
	Psychopathy	6	44.500	47.768	6.911	
	Psychoneurosis	28	43.893	123.803	11.122	
	Schizophrenia	24	42.167	106.123	10.309	
	Depression	36	46.722	121.006	11.003	
	Migraine	10	41.100	141.656	11.902	
	Epilepsy	8	44.625	134.411	11.594	
Male	Sex only	99	37.768	140.323	11.844	*F* ratio: 8.326
Female		134	42.082	126.632	11.253	d.f.: 1/231
						P: .01
						η^2: .035
Diagnosis only	Healthy controls	49	28.959	58.165	7.627	*F* ratio: 8.712
	Psychopathy	18	44.333	49.686	7.049	
	Psychoneurosis	45	43.222	120.904	10.996	d.f.: 6/226
	Schizophrenia	41	43.415	187.575	13.695	
	Depression	51	44.530	111.614	10.565	P: <.001
	Migraine	14	37.143	144.586	12.024	
	Epilepsy	15	43.000	128.714	11.345	η^2: .190
Addition of sex to diagnosis			*F* ratio: 4.433			
			P: <.001			

Table 4 lists the results of a similar 2-way analysis of variance, this time comparing the influence of chronological age on the total mean E. I. scores of the 7 diagnostic groups in 623 subjects. It shows that the combination of diagnosis and age accounted for rather more than 23% of the variance while diagnosis alone was responsible for 15%. The supplementary variance obtained by the addition of age to diagnostic grouping was significant at the 1% confidence level.

Because of its fundamental importance to emotional maturity, the influence of the age variable was further investigated by running correlation coefficients of total E.I. scores against chronological age in each of the 7 diagnostic groups. Table 5 shows that a significant negative correlation obtains in all groups except epilepsy and schizophrenia with the implication that apart from these 2 illness categories, emotional maturation takes place progressively as age advances both in healthy people and in the mentally ill. As the slopes illustrated in Fig. 4 (and obtained from the relevant regression equations) indicate, both the *rate* of change and the *starting level* of change from its arbitrary commencement at age 15 in this investigation, differ somewhat between the healthy group and the psychiatric patients. The growth potential for emotional development, seen at

TABLE 4

DIFFERENTIAL INFLUENCE OF DIAGNOSIS AND OF CHRONOLOGICAL AGE ON EMOTIONAL IMMATURITY SCORE: RESULTS OF A 2-WAY ANALYSIS OF VARIANCE. COMBINED GROUP

Age range (years)	Psychiatric groups	N	Mean E.I. score	Variance	s	Analysis of variance
25 and under	Healthy controls	131	35.221	120.927	10.996	*F* ratio: 9.213
	Psychopathy	34	47.294	112.941	10.627	
	Psychoneurosis	96	48.854	208.309	14.433	d.f.: 20/602
	Schizophrenia	21	46.762	88.191	9.391	
	Depression	8	52.750	34.214	5.849	P: <.001
	Migraine	3	54.000	28.000	5.291	
	Epilepsy	7	46.000	173.333	13.165	η^2: .234
26-35	Healthy controls	97	33.897	84.031	9.168	
	Psychopathy	22	41.182	188.823	13.742	
	Psychoneurosis	37	41.729	358.556	18.936	
	Schizophrenia	19	45.158	134.807	11.611	
	Depression	20	47.600	109.305	10.455	
	Migraine	3	32.667	145.334	12.052	
	Epilepsy	4	44.500	59.667	7.724	
36 and over	Healthy controls	32	28.500	93.936	9.692	
	Psychopathy	9	43.333	156.000	12.490	
	Psychoneurosis	27	40.000	95.538	9.774	
	Schizophrenia	8	35.250	363.357	19.062	
	Depression	31	40.903	107.690	10.377	
	Migraine	8	33.750	78.357	8.852	
	Epilepsy	6	39.333	25.067	5.006	
25 and less	Chronological age only	300	42.500	180.699	13.442	*F* ratio: 10.204
26-35		202	38.733	179.520	13.398	d.f.: 2/620
35 and over		121	36.677	132.204	11.498	P: <.001
						η^2: .032
Diagnosis only	Healthy controls	260	33.900	104.791	10.237	*F* ratio: 18.715
	Psychopathy	65	44.677	147.784	12.157	
	Psychoneurosis	160	45.400	242.958	15.587	d.f.: 6/616
	Schizophrenia	48	44.208	160.211	12.657	
	Depression	59	40.034	114.882	10.718	
	Migraine	14	37.857	143.670	11.986	
	Epilepsy	17	43.300	167.000	12.923	

Addition of age to diagnosis..... *F* ratio: 4.492 P: .01

TABLE 5

THE CORRELATION BETWEEN EMOTIONAL IMMATURITY AND CHRONOLOGICAL AGE

Diagnostic group	N	Chronological age range (years)	Mean age (years)		Correlation coefficient: E.I. score with age		
			Years	s	r	t	P
Healthy controls	260	15-70	26.708	7.565	—.29	16.71	<.001
Migraine	14	15-68	38.429	13.928	—.56	2.12	.05
Psychopathy	65	15-58	26.569	7.250	—.25	2.07	.05
Psychoneurosis	160	15-60	26.500	8.104	—.24	3.07	.01
Affective disorder—depression	59	18-76	37.559	11.095	—.34	2.73	.01
Epilepsy	17	18-60	32.000	12.410	—.43	1.85	N.S.
Schizophrenia	48	15-60	27.958	6.782	—.18	1.24	N.S.

its norm in mental health, is less than par in mental disorder.

EXTRACTION OF THE EMOTIONAL MATURITY QUOTIENT

The foregoing correlations suggest that adequate meaning can be given to emotional dysplasia only when the age factor is given proper weight. Such a consideration applies manifestly to the measurement of intellectual growth and can but be anticipated in any attempt to quantify emotional development. The combined group of 260 healthy controls was selected as the basis for an evaluation of the "emotional age." It will be recalled that the age range for the individuals of this group was from 15 to 70 years; their raw E.I. score ranged between 14 and 72. The correlation coefficient was −.29 while the standard deviations were $\sigma_x = 7.500$ and $\sigma_y = 8.726$; the slope of the line of regression is illustrated graphically in Fig. 4. Computation of the regression equations showed that the best estimate of the E.I. score is given by the following formula: E.I. Score = 40.2 − .34 (age), with a standard error of 7.996, while that for age was: Age = 36.0 − .34 (E.I.); S.E. = 6.869. By analogy with the relationship of "mental age" to the intelligence quotient, the E.M.Q. or emotional maturity quotient is given by the formula: $\text{E.M.Q.} = \frac{\text{E.A.}}{\text{C.A.}} \times 100$, where E. A. is the emotional age as determined by the regression equation for age, and C.A. the chronological age of the subject to the nearest year.

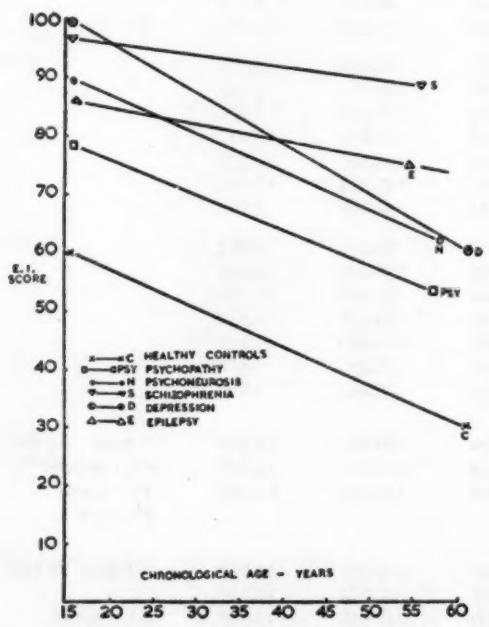

FIG. 4.—The potential drive towards maturity exhibited by various diagnostic groups in terms of progressive diminution of emotional immaturity as age advances. The slopes for the schizophrenic and epileptic groups are not statistically significant; those for the remaining groups are significant.

An application of the E.M.Q. is seen in Table 6 where the mean quotients for each of 6 psychiatric diagnostic classifications are listed for comparison with the controls. Another application is given in Table 7 in which the mean E.M.Q. has been computed for the control group, after subdivision into occupation, sex, and social class categories. It is relevant to note that emotional maturity by no means appears to march hand in hand with intellectual achievement.

OTHER CORRELATES OF THE E.I. SCORE AND THE E.M.Q.

A further illustration and confirmation of the suggestion that a high I.Q. is certainly no guarantee of a similarly advanced emo-

TABLE 6

MEAN EMOTIONAL MATURITY QUOTIENTS (E.M.Q.) FOR PSYCHIATRIC GROUPS STUDIED. THE E.M.Q. IS TAKEN TO BE:

$$\frac{\text{Emotional Age}}{\text{Chronological Age}} \times 100.$$

THE EMOTIONAL AGE (E.A.) IS OBTAINED FROM A REGRESSION EQUATION BASED ON THE HEALTHY CONTROL DATA AND IS GIVEN BY: E.A. = 36.0 − (0.34 × EMOTIONAL IMMATURITY SCORE)

Diagnostic group	N	Mean chronological age (years)	Mean emotional immaturity (E.I.) score	Mean emotional age (years)	Mean emotional maturity quotient (E.M.Q.)
Healthy controls	260	24.500	33.900	24.474	99.89
Psychopathic personality	65	26.587	44.677	20.800	78.23
Psychoneurosis	160	28.375	45.400	20.564	72.47
Schizophrenia	48	27.958	44.208	20.969	75.00
Affective disorder—depression	59	37.560	40.034	22.388	59.61
Migraine	14	38.428	37.857	23.129	60.19
Epilepsy	17	32.000	43.300	21.278	64.31

TABLE 7

SCATTER OF THE E.M.Q. AMONG SEX AND OCCUPATIONAL CATEGORIES OF THE CONTROL GROUP

Control group category	N	Mean chronologic age (years)	Mean E.I. score	Mean emotional age (years)	Mean E.M.Q.
Army (males)	202	21.580	35.048	23.132	107.66
Nurses and technicians (female)	26	25.818	30.950	25.477	98.68
Physicians and technicians (males)	32	30.345	27.407	26.682	87.92
Total professional civilians	58	28.392	28.959	26.154	92.12
Total control group	260	24.500	33.900	24.474	99.89

tional maturity is afforded by the cross correlation of the E.M.Q. with the results of intelligence testing. A verbal I.Q. was obtained on 86 healthy subjects who formed part of the control sample of the present investigation. The actual test used was the Mill Hill Vocabulary test(13). Computation yielded a negative coefficient of correlation between these two variables ($r = -.295$) which a t test proved to be statistically significant ($t = 2.844$; d.f = 84; $P = .01$).

Ex hypothesi a positive correlation might also be assumed to exist between emotional immaturity and the factor of "neuroticism"; this has been found to be the case when correlations were run between the E.I. score and tests highly saturated with this factor. Two such tests were employed and the results are shown graphically in Figures 5-8. Figures 5 and 6 show the extent of interdependence existing between the E.I. Score and the results of the 46-item Maudsley Medical Questionnaire ("M.M.Q.") in a group of 111 healthy subjects and a mixed group of 57 psychopaths and psychoneurotics. For many applications the cut-point for this M.M.Q. test has been taken to be a score of 20 and above, the higher the score the greater the "neuroticism"(13). It will be seen that some 7 of the controls (6.3%) and 21 of the neurotics and psychopaths (36.9%) would have been misclassified by the M.M.Q. test. With a cut-point on the E.I. score of 50, the misclassification would have been 7 of the con-

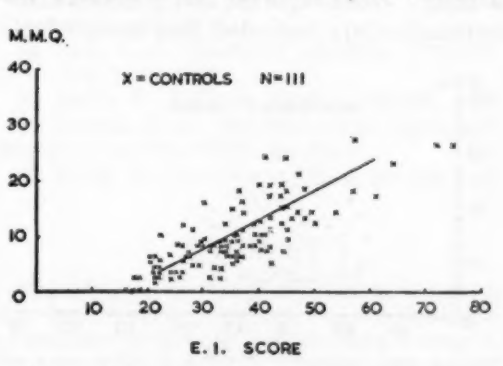

FIG. 5.—The correlation between the results of the Maudsley Medical Questionnaire ("M.M.Q.") test for "neuroticism" and the total raw E.I. Score control group.

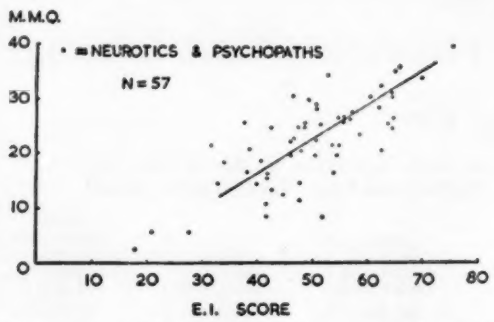

FIG. 6.—See Fig. 5. Neurotic and psychopathic groups.

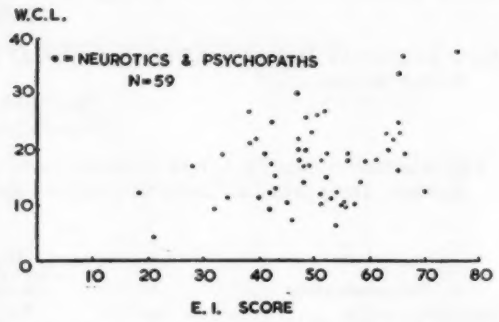

FIG. 8.—See Fig. 7. Neurotic and psychopathic groups.

trols (6.3%) and 29 of the neurotics and psychopaths (50.9%). A close relationship evidently holds between results of the M.M.Q. test and the E.I. Score, the M.M.Q. yielding a slightly better differentiation in terms of "neuroticism."

The second test of this factor to be screened against the E.I. Score was the Word Connexion List ("W.C.L.") (11). Here the cut-point has been taken to be a score of 8. Employing similar determinants as for the "M.M.Q.," Figures 7 and 8 show that the same kind of interrelationship exists, though for this test the scatter is wider. By the use of the E.I. Score, 6.1% of the controls and 49.2% of the neurotics would have been misclassified. Using the W.C.L. the misclassification figures would have been 23.5% and 5.1% respectively.

The last example of possible intercorrelations of emotional immaturity as measured by the test to be mentioned here concerns another manifestation of immaturity of the personality. Work reported in a previous communication (29) indicated that morphological immaturity—a fixation of structural development differentially and at various phases of infancy and childhood, is characteristic of certain psychiatric patients by comparison with healthy control groups. Sampling 20 such morphologically immature traits found to be statistically differentiating between mental disorder and mental health made it possible to educe an "index of morphological maturity" which was sensitive to similar age, sex, and diagnostic category variables as have been currently demonstrated for the factor of emotional immaturity. Since this work was carried out in the main on the same group of subjects employed in the present investigation, it was possible to cross-correlate the 2 sets of data and express the extent of interdependance between them.

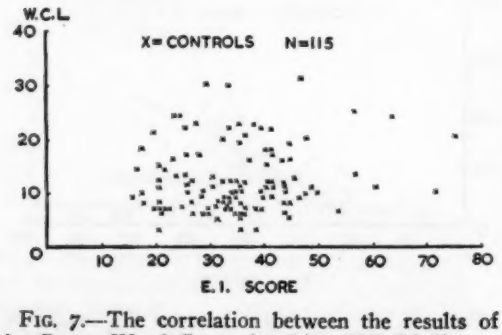

FIG. 7.—The correlation between the results of the Crown Word Connexion List ("W.C.L.") test for neuroticism and the total raw E.I. Score. Control group.

The results of such a procedure revealed a positive correlation ($r = +.30$) between morphological and emotional maturity which possessed statistical significance ($t = 8.30$; d.f. = 331; $p < .001$). Calculation of the appropriate regression equations (E.I. = 31.75 + 1.26 M.I.; M.I. = 4.45 + 0.06 E.I.), together with an estimate of the probable potential error involved (Standard error of estimate: $S_{EI} = 11.62$ and $S_{MI} = 2.81$ for the emotional and morphological variables respectively), makes it possible to predict either of these 2 very different aspects of constitutional and personality retardation from a knowledge of the other.

SUMMARY

1. A 99-item questionnaire is introduced to estimate the extent and dimensions of emotional immaturity or dysplasia in psychiatric patients. It is shown to be validly

differentiating with respect to 260 healthy controls and 363 psychiatric patients classified in 6 diagnostic groups. Eighteen dimensions of the concept were tested and of these 13 proved to be statistically significant.

2. Chronological age and sex were found to be critical variables in addition to diagnosis and facilitated the extraction of an emotional maturity quotient, the "E.M.Q." Emotional immaturity lessens significantly with advancing years in all groups save schizophrenia and epilepsy but the growth potential is less for mentally sick patients than for the healthy controls.

3. The raw E.I. Scores and E.M.Q. showed a positive significant interdependance with "neuroticism" and with morphological growth estimates but a slight negative correlation with an I.Q. test.

ACKNOWLEDGMENTS

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APPENDIX

The following represents the way in which the E.I. Questionnaire is laid out. The 18 dimensions of emotional immaturity listed in Table 2 occur in the same order in the questionnaire; they are not labelled but each dimension is separated from the next by triple spacing.

E.I. Rating Scale. Form A (i) Rev.

INSTRUCTIONS

Please fill in the following form as accurately and as honestly as you can.

This information is required by the doctor and nothing that you write will be used in any personal way at all. These questions are asked for research reasons only: we are solely interested in assessing the sort of personality which may be common to a group of individuals of your particular age group.

Give your answers as you know yourself—not as you would wish yourself to be.

Answer *all* the questions asked, do not leave any blanks. Go as quickly as you can, don't stop to think. Put a ring round the correct answer, either "Yes" or "No."

NAME in full.....

AGE .....

Do you sometimes have terrifying dreams or nightmares?.....	YES	No
Do you day-dream much?.....	YES	No
Do you like day-dreaming and building castles in the air?.....	YES	No
When you dream at night, do your dreams seem sometimes very real?..	YES	No
Have you ever had difficulty in deciding what was a dream and what was real life?.....	YES	No
Do you dream in color sometimes?.....	YES	No
Are you afraid of the dark?.....	YES	No
Are you afraid of thunderstorms, of heights or of loud noises?.....	YES	No
Have you any other fears?.....	YES	No
Do you read the comic parts of newspapers first?.....	YES	No
Does the sight of blood upset you?.....	YES	No
Does fire fascinate you?.....	YES	No
Do you believe that fairies might exist?.....	YES	No
Do you easily get angry?.....	YES	No
Do you sometimes get cross without knowing why?.....	YES	No
Do you seem to feel better after a temper is over?.....	YES	No
When you get angry, do you kick and stamp or throw things about?....	YES	No
or swallow your anger and walk away?.....	YES	No
Or are you always calm and only answer back?.....	YES	No
Do you like organizing things?.....	YES	No
or prefer someone to do that for you?.....	YES	No
Do you like taking responsibility?.....	YES	No
Does the night seem to pass slowly?.....	YES	No
Can you be quite happy on your own?.....	YES	No
or only when in company?.....	YES	No
Do you like making your own decisions?.....	YES	No
or having someone make them for you?.....	YES	No
Can you sit still?.....	YES	No
Do you tend to get bored rather easily?.....	YES	No
Have you had a lot of illness in your life?.....	YES	No
Do you like to live close to your mother?.....	YES	No
Are you very attached to your mother?.....	YES	No
Does it make you upset if you cannot see your mother frequently?.....	YES	No
Do your parents tend to irritate you sometimes?.....	YES	No
Are you very stubborn or strong-willed?.....	YES	No
Are you inclined to sulk if you can't get your own way?.....	YES	No
Are you impatient?	YES	No
Does it annoy you to be beaten in an argument?.....	YES	No
Does your nose get stuffed-up when you are unhappy?.....	YES	No
Are you a moody sort of person?.....	YES	No
Do you blush easily?.....	YES	No
Is it easy for you to relax?.....	YES	No

Do you often act on the spur of the moment?	YES	No
Do you weep easily?	YES	No
Have you ever wished you were dead?	YES	No
Does noise readily distract your attention?	YES	No
Have you ever felt your body did not belong to you?	YES	No
Do you sometimes find yourself imitating the voice and actions of those you admire?	YES	No
Were you bullied at school?	YES	No
Do you imagine you could be hypnotized?	YES	No
or have you ever felt you were so influenced by some person?	YES	No
Do you usually visit the cinema at least once a week?	YES	No
Do you sometimes get a lump in your throat or tears in your eyes while watching a moving scene at the cinema?	YES	No
Are you a religious person?	YES	No
Have you ever doubted the existence of God?	YES	No
Does your conscience worry you?	YES	No
Have you ever regretted growing up?	YES	No
Do you sometimes wish that you were like Peter Pan who never had to grow up?	YES	No
Is childhood the happiest time in life?	YES	No
Do you sometimes dream of yourself as a little child?	YES	No
Do you like making toys or models?	YES	No
Do you prefer to be with people older than yourself?	YES	No
or with people younger than yourself?	YES	No
Do you sometimes wish you had been an actor or a film star?	YES	No
Would you like to be famous?	YES	No
Do tears come into your eyes sometimes when you laugh?	YES	No
Do you enjoy being tickled?	YES	No
Are you clever at making things?	YES	No
or do you tend to be 'fumble-fisted' with your hands?	YES	No
Are you right handed, left handed or ambidextrous—both handed?	R.	L. BOTH
If right handed, have you always been so?	YES	No
Which is your keenest eye—the one you would use for a telescope?	R.	L.
Do you find that gestures help when you are talking?	YES	No
Do you tend to find yourself involved in squabbles?	YES	No
Are you shy?	YES	No
Is there anyone you dislike or even hate?	YES	No
Do you prefer watching games?	YES	No
or actually playing them?	YES	No
Do you like competitions?	YES	No
Are you a good mixer?	YES	No
Have you an inferiority complex?	YES	No
Do you feel awkward with strangers?	YES	No
Have you any really close friends?	YES	No
Is there anyone you look up to and admire?	YES	No
Do you tend to place people on pedestals and make heroes of them?	YES	No
Do you tend to find the day too short for all that you would like to do?	YES	No
or do the days drag by and never end?	YES	No
How far do you find yourself thinking ahead? Have you planned your future for	TOMORROW NEXT WEEK NEXT YEAR THE NEXT TEN YEARS YOUR OLD AGE	

Have you decided exactly what you want to do in 5 years' time?.....	YES NO
Are you superstitious?.....	YES NO
Do you believe that numbers can bring you luck—good or bad?.....	YES NO
Do you believe that you can influence people to do things simply by thinking about it?.....	YES NO
When you switch on the radio, which programs do you prefer?.....	LIGHT MUSIC TALKS CLASSICAL MUSIC GAMES
Do you prefer classical music to dance or jazz music?.....	YES NO
Is mathematics your good subject?.....	YES NO
Do you tend to get muddled counting your change?.....	YES NO
Are you	SINGLE ENGAGED MARRIED WIDOWED SEPARATED DIVORCED
Do you prefer to be with people of your own sex?.....	YES NO
or with people of the opposite sex?.....	YES NO
Have you ever wished that you were of the opposite sex?.....	YES NO
Do you think sex is disgusting?.....	YES NO
Does your body scare you?.....	YES NO
Is sex something you prefer not to talk or think about?.....	YES NO
Are you afraid of falling in love?.....	YES NO
If you could choose, how many children would you like to have?.....	NONE ONE MORE
Have you stopped masturbating?.....	YES NO
Do you feel it has harmed you in any way?.....	YES NO
Does homosexuality	ATTRACT YOU DISGUST YOU INTEREST YOU OR IS IT A MATTER OF INDIFFERENCE
Has anyone ever approached you for a homosexual purpose?.....	YES NO
How many cigarettes do you smoke a day?.....	FIVE TEN TWENTY THIRTY
How many ounces of tobacco do you smoke a week?.....	ONE TWO THREE MORE
How many alcoholic drinks do you take in a day?.....	ONE TWO MORE

Have you answered all the questions? Spend the next few minutes running through the list to make sure you have not left any out. THERE ARE NO RIGHT OR WRONG ANSWERS.

DISCUSSION

DR. FLANDERS DUNBAR.—Dr. Lovett Doust is to be congratulated for calling attention to the "loose way" in which the term "emotional immaturity" has been used. Psychopathic personalities, psychotics, and neurotics show signs of immaturity but so do patients with diverse types of somatic disorder or with an accident habit. Dr. Doust's definition of emotional immaturity as "the relative fixation or dyspiasia of emotional development at a level out of accord with that to be expected at a given chronological age" seems not to help because there is no unanimity as to what is to be expected. Furthermore, the emotional immaturity may be

consistent with continuing growth in a healthy direction, or it may indicate a state of stunted growth or atrophy, or even regression.

The constellation of questions on the basis of which the E. I. Q. is determined would seem not to indicate the degree of fixation that is being measured, as would seem to be essential in arriving at a "developmental coefficient." Hence unless one has decided which of these diverse emotional states is to be labeled "immaturity," it is little wonder that, as Dr. Doust said, there are no instruments to measure it.

The phrase "emotional immaturity" implies that there is some expected or normal behavior which can be correlated with chronological age. Yet from diverse specialized fields in medicine has come the statement that chronological age has little significance *per se*. A 60-year-old may have the arteries and endocrines to be expected in a 20-year-old, whereas the body of a 20-year-old may show characteristics associated with middle or old age. Yet the young arteries of the 60-year-old and his accompanying resilient and forward-looking personality, although perhaps not to be expected at his age, would not be considered an index of emotional immaturity. It may be that what we are looking for is an equilibrium in the development of each individual which allows for continuing growth more or less regardless of his likeness to others of his chronological age.

The "great vagueness" in the concept of emotional immaturity as used by clinicians results in part from the fact that each seems to have his own idea of what is to be considered mature or immature behavior. For example, one of the most "emotionally mature" persons whom I have known stated that when faced with a difficult problem of putting an idea across he first tried an appeal to reason. If this failed, he requested the opportunity to make a pilot test of the usefulness of the idea. If the test confirmed his idea but was still disregarded, he "lay on the floor and kicked and screamed and yelled" figuratively speaking, and made himself such a nuisance that people had to pay attention. The "kicking and screaming" is infant behavior, but directed by a mature ego with a clearly defined goal for which the act is staged, it may be called mature behavior.

Dr. Doust has worked out a personality profile which serves to sort out persons suffering from one or another type of neurosis. Although it may be up to 80% diagnostically correct, it has no essential bearing on the meaning of emotional immaturity. When the most generally held opinions are tested by examination of a large group of patients and controls, it almost appears that the word immaturity has been used in a sense which is indistinguishable from illness.

Dr. Doust's study is an excellent example of the kind of research which begins with what might be called a survey of opinion or attitude. Since, however, it is admitted at the beginning that the attitudes to be surveyed are vague or ill-defined, the outcome of this survey can do little to add concrete reality to the concept under discussion.

Nevertheless the statistical analysis of the test is certainly valuable as an exposition of the differences among types of illness, and between those who are sick and those who do not appear to be sick. In treating a sick person one has to cope with the child in the personality, "the baby in every patient," and the child in every person may be child-like and welcome a little help in growing up, or it may be childish or sick to the extent that it resents and fears help. Immaturity seems to be used as a label for the sick or hurt child in every person rather than for the healthy child in every person. Since there is no real agreement about the meaning of emotional immaturity, I would like to substitute the better-defined term in ability to maintain homeostatic equilibrium under stress.

Dr. Doust speaks of "developmental potential falling out of phase with the advance of chronological age." He speaks of an "emotional immaturity quotient." I would prefer to say that some people appear to be emotional morons because their behavior is out of phase with their intellectual development and their feelings out of phase with their status as effectively functioning human beings.

It is interesting that Dr. Doust found a slightly negative correlation between the I.Q. test and the emotional immaturity quotient. It is well known that many intellectual prodigies are emotional morons, which implies that they have a flair for self-defeating and other destructive behavior. This, however, is only one form of emotional immaturity, and I think it would be more accurate to call it maladjustment or illness rather than immaturity because it is a behavior pattern that one is unlikely to grow out of without help. But I find it more satisfactory to measure positives rather than negatives, because, unless well versed in higher mathematics, in operating with negatives one is likely to encounter imaginary quantities as the square root of minus one has been called.

I would suggest that perhaps more important than the attempt to define emotional immaturity might be the attempt to develop a means of measuring the capacity of the organism to maintain homeostatic equilibrium irrespective of age. From this a growth coefficient or an emotional maturity quotient might be derived.

Dr. Doust has made a pioneer attempt to clarify our thinking about immaturity, and, as you all know, I feel a personality profile to be more useful than any battery of tests although usually more is learned if the 2 are combined. But I still feel that emotional immaturity remains to be defined. In an attempt to make progress on any scientific frontier the value of the research is not measured entirely by the definitive results. Perhaps Dr. Doust's paper should be taken as a warning that, pending further research, we be more specific about what we mean when we label someone immature.

PHYSIOLOGICAL BACKGROUND OF THE CO_2 TREATMENT OF THE NEUROSES [1]

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The CO_2 treatment(1) and its modifications(2, 3, 4, 5) are capable of amelioration and cure of psychoneurotic or psychosomatic symptoms. The following conditions have been reported as having benefitted from this treatment: character neuroses including alcoholism, dipsomania, overt-passive homosexuality and other sexual perversions, chronic inferiority feeling, neurotic depression; anxiety neuroses, phobias, irritability and tension symptoms; stuttering, female frigidity, and some obscure skin reactions apparently related to neurodermatitis. Psychosomatic disorders such as asthma and skin allergies, duodenal ulcer, spastic colitis, ulcerative colitis and chronic constipation have been reported as having benefitted or having been cured by systematic CO_2 treatment.

The technique of the CO_2 treatment and its different modifications have been published elsewhere and, therefore, will not be described here. It suffices to say that deviations either from my original method or from Milligan's, LaVerne's, and Selinger's modifications of the original treatment resulted in failure to produce recoveries or improvements. Those who have been using any one of the above-mentioned methods with or without psychotherapy report cures and improvements in the above-described conditions, ranging from 50% to 80% of the cases treated. On the average, around 60% of the patients can be cured or greatly improved by the application of the method.

When I first conceived the application of CO_2 to psychoneurotic conditions my theory regarding the mode of action of this treatment was based almost exclusively on Lorente de No's(6) work. Lorente de No showed on isolated frog nerve that CO_2 raised the threshold of stimulation, increased the membrane potential, and, finally, increased the ability of the nerve to conduct trains of impulses. Furthermore, CO_2, delayed the appearance of fatigue in the stimulated nerve. He demonstrated that the effect of CO_2 on the membrane potential is proportional to the logarithm of its concentration. The above changes, but mostly the increased threshold of stimulation, I thought, were responsible for the anesthesia. Furthermore, taking into consideration the Eccles-Brooks(7) hypothesis of central inhibition, I applied it to explain the beneficial effect of the treatment. The Eccles-Brooks hypothesis postulates that increase in membrane potential lowers the excitation of the Golgi cells and also converts many excitors into inhibitors and thus augments inhibition. Lowered cortical activity, due to deprivation of many of the afferent impulses from lower structures, also assists in converting Golgi cells into inhibitors, and this results in further cortical inhibition. Assuming that psychoneurotic processes are maintained by continuously reverberating circuits, I postulated that by an increased conversion of Golgi type excitors into inhibitors the incessant reverberation of the closed circuits would be decreased and finally terminated and thus the pathological basis of the psychoneurotic process eradicated.

This simplification, however, does not take into consideration many other effects of CO_2 that are partly central and partly peripheral. The first point that should interest us here is the mode of action of CO_2 in the nervous system. Unfortunately, however, the fundamental question as to why CO_2 acts as it does is still unanswered. We know that it changes the pH concentration of the blood and of the living tissue, but Lorente de No has shown that its action on the nerve cell is independent of its effect on pH concentration. This finding was later confirmed by Bain and Pollock (8). Seifritz(9) saw CO_2 stop the flow of protoplasm; if the concentration was too high or the exposure too long the protoplasm was coagulated. In his opinion the anesthetic effect of the CO_2 is due to the gas molecule

[1] Read at the 109th annual meeting of The American Psychiatric Association, Los Angeles, Calif., May 4-8, 1953.

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and its mode of action consists of a reversible gelantinization of the protoplasm by CO_2. This gelatinization, if it occurs in nerve cells, may explain the reversible morphological changes seen by Stephens(10) in the central nervous system of rats acutely and chronically poisoned by CO_2. The increased acidity of the brain and the body tissues probably facilitates this reversible process. Dusser de Barenne, McCulloch, and Nimms(11, 12) found that a low pH of the cortex caused by CO_2 was associated with low electrical activity and a decreased excitability of the cortex, a finding that is in conformity with Lorente de No's experiments. As to how the pH effect of the CO_2 is mediated, there is a strong probability that carbonic anhydrase is involved in the process. Carbonic anhydrase catalyzes hydrogination and dehydrogination of CO_2, and because of this catalytic action it may increase or decrease pH and so affect the activity of other enzymes. It is probable that carbonic anhydrase might increase speed of conduction and promote or delay recovery in the synapse and also play an active part in the effect of CO_2 upon the brain.

It is known from McLennan's and Elliot's (13) work that CO_2 destroys acetylcholine by lowering pH in the brain. All the above effects basically amount to a decreased activity or resting state of the nervous system penetrated by CO_2. This resting state, however, is not unmodified by the concurring biochemical and glandular changes.

We know from Bain's and Klein's (14) work that the concentration of brain lactate and pyruvate bears an inverse relation to the levels of blood carbon dioxide, hydrogen, oxygen, and cerebral blood flow, inasmuch as they found the highest level of lactate in animals having the lowest level of blood carbon dioxide and the lowest level of lactate in those breathing carbon dioxide plus oxygen. The pyruvate levels in the animals receiving bicarbonate, carbon dioxide, or both, were lower than in those given no special treatment. However, this effect of the carbon dioxide cannot be caused only by its effect on the hydrogen ion concentration since relatively high concentration of hydrogen ions in blood produced by injection of hydrochloric acid is not accompanied by a particularly low level of brain lactate. The corresponding figures, as they were found by Bain and Klein are as follows: the lactate concentration of the brain in room air varies from 1.4 to 2.8. If the animal receives 30% CO_2 and 70% O_2 for 10 minutes this concentration falls to 0.6 m.M/Kg. of tissue. The brains pyruvate concentration in room air varies from 0.20 to 0.22 and it falls in 30% CO_2 to 0.09 m.M/Kg. On the other hand, the concentration of brain phosphates, glucose, and ratio of brain to plasma glucose does not show significant variation in room air or in relatively high concentrations of CO_2 in resting animals.

According to these authors there is little doubt, and so it seems from their figures, that CO_2 has profound effects upon the levels of lactate and pyruvate in the brain of resting animals and upon the levels of phosphates in convulsant animals. The mechanism by which these effects are mediated is obscure. The explanation is that "the resulting increase in blood flow and oxygen tension enabled the brain to more clearly balance energy demands with oxidative processes and as a consequence less lactate was formed and high energy phosphate reservoirs were not depleted."

Another exceedingly interesting facet of the peripheral effect of CO_2 was discovered by C. T. G. King, *et al.*(15). They found a marked rise in blood sugar but no significant change in the eosinophile count during exposure to CO_2 both in air and in oxygen. Their conclusion is that the glycogenic effects of CO_2 were produced independently of any changes in the absolute number of eosinophiles.

On the morphological level there are very important changes both in the brain and in the glandular systems of the experimental animals. These experiments, however, were not replicas of the therapeutic situation, but rather, acute or chronic CO_2 poisoning; it is doubtful, therefore, how much of the results of these experiments can be applied to human treatment. Stephens(10), therefore, put her rats into carbon dioxide and kept them there until they died. The concentration of CO_2 in the so-called acute experiment was slowly increased from 18% to 43.2%. The rats' survival periods varied from 2½ to 19⅓ hours under such conditions. In the chronic experiments Stephens kept her rats from 10 to 66 days in changing concentrations of 6 to 23%

of carbon dioxide. She found that in both acute and chronic experiments the greatest alterations were in the thalamus, brain stem, and spinal cord. The cortex of the animals was comparatively resistant. The histopathologic changes in the nerve cells were nonspecific and appeared to be reversible except possibly those in the more damaged areas. The blood vessels were undamaged and there was no change in the myeloarchitecture. The observed swellings in the nerve cells probably correspond to the changes observed by Seifritz, that is, a gelatinization of the protoplasm or coagulation of the same, if the exposure is too long.

Schaefer(16) examined some of the endocrine glands of guinea pigs, rats, mice, and dogs exposed to CO_2 concentrations from 3% up to 24%. Staining and morphological methods, as well as adrenalin content determination, and other functional tests, proved that during prolonged exposure of guinea pigs and dogs to 3% CO_2 a hypersecretion of adrenalin is followed by a hyposecretion, the latter due to a diminished synthesis. A hyper- and subsequent hypophase was found, too, in the adrenal cortex in the basophilic cells of the pituitary glands. The thyroids became more and more inactive with prolonged exposure time to 3% carbon dioxide. More recently, Rev. Brice Inglesby(17) exposed albino rats to prolonged doses of 30% CO_2 and 70% O_2. After exposures ranging from 1 to 70 hours, definite hyperplastic changes were observed in the thyroid glands of the animals; high columnar epithelial cells, decrease in size of the follicles, diminished amount of colloid and basophilic staining character of the colloid appeared. During the same period a marked decrease in weight of the experimental animals was noted.

Pollock, Stein, and Gyarfas(18, 19, 20, 21) found, in cats, that CO_2 inhalation produced low amplitude, fast cortical activity. After the interruption of the CO_2, even if it was administered for more than 4 hours, there was always a rapid return of the electrical activity of the brain to the pre-CO_2 level. The response of the thalamus to CO_2 was much less than that of the cortex and so was the hypothalamic response that showed lower than cortical amplitudes and slower frequencies. All in all, the authors found that subcortical structures did not seem to be as sensitive to CO_2 as the cerebral cortex. In opposition to these findings in animal brain Gibbs' and Gibbs'(22) findings on humans show an increased amplitude and slow frequency as a response to inhalation of CO_2.

It is extremely difficult to construct a harmonious picture of the above-mentioned changes that could be correlated either with the fact of psychoneuroses or with the clinical improvement produced by CO_2.

It is needless to say that we must develop a concept of psychoneuroses that permits a modification of these conditions by some or many of the described physiological changes. From the above data the following can be selected as indicating a trend: (1) an increased cerebral inhibition that is repeated in certain structures of the brain at every treatment (Eccles-Brooks); (2) a decreased excitability of the cortex reproduced at every treatment (Dusser de Barenne, McCulloch, and Nims); (3) the effect of the CO_2 upon the carbohydrate metabolism of the brain enabling it to more clearly balance energy demands without oxidative processes (Bain and Klein); (4) a changed balance in the activity of the pituitary, adrenal, and thyroid glands (Schaefer and Inglesby).

If this selection is pertinent to the fact of psychoneuroses, it follows that a psychoneurotic's brain structure is hyper-irritable and either does not balance energy demands with oxidative processes properly or there is a disturbance in the distribution of this process; and finally, we may assume that there is some disturbance in the interaction of at least 3 important glands—the pituitary, adrenal, and thyroid. These postulated disturbances are rectified by the action of CO_2, as was demonstrated experimentally.

It is noteworthy that some observations on the patients improving during the CO_2 treatment verify the above postulates. There are 2 main types or clinical modes of improvement during the CO_2 treatment. The one is constituted by 3 different kinds of abreaction. One is the well known realistic abreaction when the patient relives a previous experience and discharges pent up emotions. This variety of abreaction occurs at full consciousness and is recoverable by the patient. The

second variety observed frequently during the CO_2 is what I call allegoric abreaction. During this phenomenon the patient discharges realistic emotions but they are not connected with a recovered memory, but rather with a symbolic dream. The fact of abreaction is recoverable to the patient, but its real meaning remains hidden unless it is explained to him. The third variety of abreaction is utterly unconscious inasmuch as it happens while the patient is in anesthesia due to the CO_2.

It is easy to see that these 3 varieties of abreactions—realistic, allegoric, and unconscious—can be explained by inhibition of cortical inhibitory functions, and thus they are explainable by the Eccles-Brooks hypothesis.

The more frequent clinical mode of improvement during the CO_2 treatment is manifested by decreased emotionality and by a decreased sensitivity to internal and external stimuli. This is shown by decrease and disappearance of exaggerated reactions and by progressively diminishing clinical symptoms. We can see an improved psychological economy and sometimes considerable changes in physiological activities. Improvement of frigidity in the female, normalized sexual activity in the male, improvement in the skin, nails, and hair texture, increase in the size of the female breasts, disappearance of menstrual cramps, and normalizing of the menstrual cycle are common changes in the improved cases.

These signs can be explained by the decreased excitability of the cortex (Dusser de Barenne, *et al.*) and by Bain's and Klein's findings regarding the improved balance of energy demands with oxidative processes and, finally, by Schaefer's findings with respect to the morphological and functional changes in the endocrine glands.

I do not claim that the above statements and data contain a full explanation of the psychoneurotic condition and of the mechanics of the improvement by CO_2, but I believe they provide a frame of reference upon which we can design experiments to approach the problem of psychoneurosis on an organic level.

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SOME ANTECEDENT FACTORS IN THE FAMILY HISTORIES OF 392 SCHIZOPHRENICS

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Until quite recently psychotherapy with schizophrenics was considered an unprofitable undertaking. The difficulties of getting and maintaining transference, as well as controlling hostility, were felt to offer insuperable obstacles to treatment, and the tendency was to consider the illness as primarily hereditary in origin. However, with the initiation of relatively successful innovations in the theory of therapy by such psychiatrists as Sullivan, Fromm-Reichmann, and Rosen, the earlier views began to change. Increasingly, schizophrenia is viewed as the outcome of a disturbance in interpersonal relations, facilitated and reinforced by intensified dereistic thinking, sometimes originating in early childhood. Hereditary predispositions may indeed contribute to the disturbance, but, insofar as they do, they act conjointly with social stresses in the maturation of the individual. However, we still have a very imperfect knowledge of the nature and significance of the schizophrenic process and particularly of antecedent conditions in the life history that are associated with the development of the psychosis.

In order to develop a more useful theory of schizophrenia as largely resultant from a disturbance in interpersonal relations, it is necessary to assess the kinds, frequency, and intensity of stresses in the lives of such patients. One research method is clinical; it consists of intensive study of a small number of cases and subsequent generalizations to all similarly diagnosed cases of whatever common factors are discovered in the therapeutic process. There is by this method always the danger of overestimating or underestimating the significance of the factors stressed by having too small or too selective a sample. It is always necessary, therefore, to supplement such studies with others employing a large sample in which an inquiry into the antecedent factors is conducted quite independently of therapy. Only then can one ascertain how generally these factors are operative. This is the method and objective of this study.

Statistical studies of this kind have to be supplemented, of course, by psychiatric case study. Factors may be found that occur relatively frequently in the life history of schizophrenics, but which do not enter, as far as can be seen from psychiatric treatment, into the dynamics of the disturbance. Furthermore, the exact way in which antecedent factors enter into the dynamics of the disturbance must be ascertained by other than statistical techniques. Rather than attempting to prove a diagnosis or particular theory, statistical studies help to give objective data, regarding antecedent events, which can be used to assess the possible inadequacy or strength of existing theories.

In this study an exploratory attempt was made to find the frequency with which certain factors entered into the life histories of a large group of schizophrenics. These factors were selected because they seemed to appear with a marked although variable frequency and often to be dynamically related to the genesis of the subsequent psychosis. The following are the antecedent factors chosen, in the order of their clinically estimated importance: (1) marked rejection and/or overprotection by one or both parents; (2) death, desertion, or divorce of the parents; (3) intense sibling rivalry; (4) ordinal placement in the sibling hierarchy; (5) membership in a family of more than average size; (6) membership in various religious groups.

PROCEDURE

The case records of consecutive admissions to the Elgin State Hospital from June through December 1948 were used. Of these 1,625 cases, 621 were discarded because of incompleteness, vagueness, or ambiguity of the clinical information in the records leaving a working sample of 1,004 subjects—585

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males and 419 females. This paper is concerned with the 392 schizophrenics (231 male and 161 female) of this sample.

Since our sample was extremely diverse in age, sex, and duration and severity of illness, it was not considered feasible to compound a control group of comparable heterogenity; hence, the extent to which certain of the variables, such as parental rejection or overprotection, occur in a "normal" population has not been determined. In other factors, however, such as the frequency of parental death, family size, etc., bases of comparison are available from such sources as the United States Bureau of the Census and the statistical department of the Metropolitan Life Insurance Company.

Much of the information needed could be obtained by simple enumeration from completed histories. The work-up of the individual patient in the Elgin State Hospital at the time of this study was perhaps more complete and detailed than is usual at comparable institutions, consisting of a detailed social history obtained from multiple informants and cross-checked, a detailed medical history, and a full psychiatric evaluation by one or more staff psychiatrists. This is, of course, in addition to the usual psychological and laboratory evaluations, and nurses', occupational therapists', and staff conference notes. Needless to say, none of the social workers or psychiatrists who compiled the histories knew that the present investigation was contemplated.

Some of the factors, such as parental rejection and overprotection required a subjective judgment. Although the disadvantages of subjective estimation of complex and poorly delineated factors are readily apparent, it was felt nevertheless that a clinical estimation of these factors when they occur in severe form can often give information of value. The criteria employed for judgment of parental rejection were those of Symonds (1), and for overprotection, those of Levy (2). Enumeration of these attitudes were made only when rejection and/or overprotection were extensive and severe.

The cases were divided into the 5 classical subtypes of schizophrenia, the classification having been previously determined by the diagnostic staff. It was recognized, however, that this would be of limited value, since Boisen(3) and others have shown that there are regional vogues in diagnosis and subclassification and that they show wide variation from one hospital to another. The cases were also divided as to sex.

RESULTS

A number of writers, salient among them Alfred Adler, have maintained that placement in certain positions in the sibling hierarchy results in highly specific and consistent stress situations which materially affect the individual's adjustment. He felt, for example, that the oldest child tends to be relatively more intellectual, more aloof and withdrawn, than the youngest, who is purported to be more sociable and outgoing. One would suspect, therefore, on the basis of these specifications, that the oldest child would be more prone to schizophrenic illness.

In Table 1 are shown the sibling positions of the 227 males of the sample.[2] Of these, 24% were oldest children, 23% youngest, 16% next-to-youngest, and 11% only children; all other placements constituted 25%. No placement in the sibling order shows conspicuous cluster in any one of the schizophrenic subtypes, although a suggestive 8 of the 23 hebephrenics are youngest children. In addition, youngest and next-to-youngest

[2] These data were not obtained for females.

TABLE 1

SIBLING POSITION OF 231 MALE SCHIZOPHRENICS

Placement	Schizophrenic subtype					Total	% of Sample
	Par.	Cat.	Simple	Heb.	Udt.		
Ordinal	23	10	1	5	17	56	24
Ultimate	16	6	2	8	23	54	23
Penultimate	15	7	2	3	11	38	16
Solitary	4	6	1	3	11	25	11
Other	21	9	1	5	22	58	25

placements predominate within the paranoid group. It is not felt, however, that these data lend support to the hypothesis that an increased vulnerability to schizophrenic illness results from specific placement in the sibling order, although in individual cases the significance of this factor seemed indisputable. It was a clinical impression that the stress of maintaining a sibling role varied so greatly from culture to culture and family to family that only when it was associated with a concomitant pathological and inadequate relationship to the parents was it a significant factor in the genesis of the psychosis. This is suggested by the interesting paucity of only children in the group (who presumably obtain more parental gratification).

Another widely held opinion is that children from large families are less prone to neurotic or psychotic illness. Membership in a large family is often presumed to prepare one more adequately for adult life, because it accentuates opportunities for integrating one's thought and behavior with that of others. Since the schizophrenic is deficient in this capacity, the possibility exists that he had little prior training in such mutual interpersonal give-and-take because of growing up within too small a family.

The number of children per family was averaged for each of the schizophrenic subtype samples, for both males and females combined. The simple type averaged 3.2 per family; paranoid 4.1; catatonic 4.3; hebephrenic 4.9; undetermined 4.0—the over-all average being 4.1. According to Dublin(4), in families that have children, the average number of children per family in America is 2.2. Thus it is seen that in the schizophrenic group, the family size is consistently larger than the national average. Among the general population 13.7% of families have 4 or more children. Among the 231 males of this sample, 52% came from families containing 4 or more children. One might then wonder if in addition to the purported advantages of large family membership there might be the disadvantage of spreading the parental affection too thinly, of diluting it into ineffectiveness and so intensifying the child's sibling rivalry and his fears of abandonment and rejection. It is also noteworthy that the most regressed patients, the hebephrenics, come from the largest families, a possible explanation being that in some instances, the regression was motivated by a desire to return to the best-loved infantile state, unwillingly relinquished to a number of usurping siblings.

At first it seemed that among the hospital population there was an inordinate frequency of membership in certain religious sects, particularly those characterized by rigid and authoritarian dogma. This impression, however, is not borne out by the data. Of the sample of 392 patients, 34% were Roman Catholic, 45% were Protestants, 9% Hebrew, 2% other sects, and 10% were without known religious affiliations. This distribution appears to correspond roughly to that of the general population in the area from which the patients were largely drawn. Unfortunately, it was not possible to determine the degree of interest and activity of the professed memberships.

Although there are many ways in which parents' attitudes toward their children may be pathological, parental rejection and overprotection are of major interest in this study. These two were chosen because they seemed clinically to be pre-eminent; secondly, because they could more readily be ascertained from the record than could such poorly delineated parental attitudes as apathy and disinterest, passivity, inconsistency, etc.

Information was obtained on such questions as: (1) Which attitude—rejection or overprotection—is more frequently antecedent in schizophrenics? (2) Which attitude is evinced preponderantly by which parent? (3) Toward which sexed child?

Table 2 shows the incidence of severe parental rejection and overprotection in the 392 subjects. Of this group, a total of 180, or 48%, came from homes in which there was a severe rejection or overprotection, or both, by one or both parents. This total comprises 55% of the entire male group and 31% of the female; the much higher incidence among the males suggests that there are factors other than constitutional accounting for the well-known preponderant incidence of schizophrenia among males.

It is also noteworthy that in this group antecedent parental rejection and overprotection are not limited to either the same or opposite sexed parent. Eleven percent of the

TABLE 2

INCIDENCE OF SEVERE PARENTAL REJECTION AND OVERPROTECTION IN 392 SCHIZOPHRENICS

	M	F	M and F Sum	% of Sample M	% of Sample F	% of Sample Total M and F
Rej. ♂	26	18	44	11	11	11
Rej. ♀	23	11	34	10	8	9
Rej. ♂, Rej. ♀	27	8	35	11	5	9
Rej. ♂, O.P. ♀	22	5	27	10	3	7
O.P. ♂, Rej. ♀	1	0	1	..	..	..
O.P. ♂	1	2	3	..	..	..
O.P. ♀	23	7	30	10	5	8
O.P. ♂, O.P. ♀	4	2	6	..	..	..
Total Rejecting and Overprotecting	127	53	180	55	31	48
Size of Sample	231	161	392			

Key:
♂—Father
♀—Mother
M—Male
F—Female
Rej.—Rejecting
O.P.—Overprotecting

males and 11% of the females had rejecting fathers. Ten percent of the males and 8% of the females had rejecting mothers. This might prompt us to re-examine our theories of personality development which accredit to the mother a very great significance in the family and the father to a position of relative unimportance. Nor would it appear from these data that the importance of a rejecting father is limited to the same or the opposite sexed child.

Eleven percent of the males and 5% of the females came from homes in which there was a profound rejection on the part of both parents. It is not possible to say from this study whether rejection by both parents is correlated with a greater severity of the psychotic process, although this was a consistent clinical impression.

Ten percent of the male sample and 3% of the female had rejecting fathers and mothers who were overprotective. The converse of this pattern, an overprotective father and a rejecting mother, occurred in only one case. Likewise, quite rare was the overprotective father without significant pathology on the part of the mother—only 3 cases were noted in the sample. Severe overprotection by the mother was found in 10% of the male cases and 5% of the female. Only 6 cases were overprotected by both parents.

Rejection by one or both parents was by far the more frequently manifested attitude, 33% having been rejected by one or both parents, while only 17% were overprotected by one or both parents. This is at variance with the study of Gerard and Siegel(5) who conclude from a study of 71 schizophrenics that they were almost uniformly exposed to markedly overprotective attitudes. Lidz and Lidz(6) conclude that only 5% of the 50 schizophrenics whom they studied could be considered to have been raised in homes that seemed reasonably favorable. It was their impression, also, that the paternal influence was harmful as frequently as the maternal.

Because of the varied size of the subtype samples, it was not possible to draw any conclusions regarding the relationships between specific patterns of parental attitudes in any given subtype of schizophrenia. Totalling the number of the 2 pathological attitudes of parents from each subtype, however, it was found that 39% of the paranoid type sample present these features, 49% of the catatonic, 55% of the simple, 81% of the hebephrenic, and 78% of the undetermined type. This much larger incidence of pathological parental attitudes in the hebephrenic subtype, quite generally considered to be the severest form of schizophrenia, may well indicate that these factors are related to the more severely regressed form of the illness.

An assessment of parental attitudes is at best careful judgment and approximation and the conclusions drawn therefrom necessarily taken *cum grano salis.* This disadvantage is negligible, however, in the determination of an easily verified and quantified factor, such as parental separation. Since they can be precisely determined and quantified, conditions of this type are ideally suited for statistical investigation and constitute a largely neglected field in psychiatric research.

For purposes of this study separation was defined as an absence of a parent from contact with the child for 11 months of the year for at least 5 consecutive years. The arbitrary use of the term was to ensure that the separation would be severe and of long term effect and could thus be roughly equated with absolute deprivation of a parent by death.

In Table 3 is shown the incidence in the schizophrenic group of death of the parents or separation from them by whatever cause before the age of 15 years. Of the entire sample, 95, or 24%, had lost a father, mother, or both by death before they reached this age. In addition, 74 patients, or 19%, had lost one or both parents by separation from them before this age. A total of 43% of the group had lost one or both parents by these means before the age of 15.

The previous work in this area shows considerable disagreement. Barry(7) has presented findings from a group of 1,500 undifferentiated psychotics. Of those born since 1910, 27.6% had lost one or both parents by the age of 12. Comparable figures for normals by other investigators were below 20%.

A recent study by Lidz and Lidz(6) of 50 young schizophrenics showed similar high incidence of parental deprivation by death and permanent separation in the family backgrounds. Forty percent had been deprived of at least one parent by these means prior to their nineteenth birthday. In contrast, the incidence of deprivation was 17% in a control group of 69 medical students. Pollach, Malzberg, and Fuller (9) recorded parental deprivations in 38.3% of 175 schizophrenic patients whom they studied.

On the other hand, Gerard and Siegel(10), in a study of 71 schizophrenic patients, state that 76% did not come from homes broken before the age of 10 years; 24% did. The breaking of the home did not seem to them to be a crucial determinant in the family background. However, in a study by Preston and Shepler(11) it was found that only 14% of a group of normal children of 8 to 10 years came from broken homes.

Oltman *et al.*(12) found an incidence of parental deprivation (prior to the nineteenth birthday) of 34.2% of a group of 600 schizophrenics. This incidence was roughly identical among individuals suffering from other psychoses and the control group, comprised of state hospital employees. They conclude from these data that the incidence of schizophrenia is unrelated to known external stresses or deprivations. The incidence of parental deprivation in their control group, however, is vastly higher than national incidence figures which suggests that a control population of hospital employees is not as representative of the general population as they appear to believe.

While there are no reliable data on the incidence of prolonged parental separation from causes other than death among the general population, the incidence of parental

TABLE 3

LOSS OF PARENT BY DEATH OR SEPARATION BEFORE THE AGE OF FIFTEEN

				% of Sample		
	M	F	M and F	M	F	M and F
Death ♂	26	12	38	11	77	10
Death ♀	19	9	28	8	6	7
Death ♂ and ♀	9	7	16	4	4	4
Separation ♂	33	20	53	14	12	14
Separation ♀	6	2	8	3	1	2
Separation ♂ and ♀	9	4	13	4	2	3
Death ♂, Sep. ♀	3	1	4	1	..	1
Sep. ♂, Death ♀	5	4	9	2	2	2
Total Death and Separation	110	59	169	48	37	43

death among the general population has been determined. According to Fisher(13), orphans (defined as persons who have lost one or both parents by death before the age of 18) comprise 6.3% of the general population 18 years of age or below. Of this schizophrenic group 23% were orphaned below the age of 15 years. Allowing even for a considerable margin of error, the much greater preponderance of parental loss by death among this group as compared to the general population is most striking: roughly 4 times as many children of this group had lost a parent by death before the age of 15 years as those of the generality.

One might expect from psychodynamic theory that loss of the mother in childhood would be a much greater trauma than the loss of the father and that this would particularly be true for males. Barry(14), in 1939, contrasted the percentages of maternal and paternal bereavement during the childhood of 549 young psychotics. He found a very high incidence of maternal deaths and no substantial differentiation was obtained for paternal deaths. However, Blum and Rosenweig(15) found from a study of 147 schizophrenic case histories that parental deaths occurred significantly more in schizophrenics than in normals, but were found to tend more toward the paternal side for male schizophrenics and toward the maternal one for the females. Contrary to expectation, in this group 46% of the schizophrenic orphans had lost a father, 36% a mother, and 18% had lost both. Among orphans under 18 in the general population, 63% have lost father only; 34%, mother; and 3% both.

Paternally deprived orphans constitute 3.9% of the general population; maternally deprived, 2.2%; and 0.2% have been deprived of both, according to Fisher(16). Among this schizophrenic population, 10.7% are paternally orphaned, 8% maternally, and 4.1% both. As Table 3 also shows, the incidence of paternal loss by separation is greater than any other kind of loss and this is true for both males and females. These facts would seem to indicate that the relationship to the father plays a role in the development of the child, both male and female, that has not been adequately appreciated or understood.

Forty-eight percent of the males had lost a parent by death or separation before reaching the age of 15 years, while only 37% of the females suffered such loss. In this factor, as well as in pathological parental attitudes, the male incidence exceeds the female. This suggests that the greater male incidence of parental loss is another important factor which may account for the greater frequency of schizophrenic psychosis among males.

Eleven percent of the males and 9% of the females lost both parents by death or separation or both before the age of 15 years. In the histories of 17% of the subjects was evidence not only of marked rejection and/or overprotection, but in addition loss of one or both parents by death or separation before the age of 15. It is not possible to say from the data if these instances of double trauma were related to an earlier onset or special severity of the psychotic process, although this was a consistent clinical impression.

It would be most instructive to know if loss of a particular parental figure made more probable the development of a particular pattern or subtype of schizophrenic psychosis. However, the greatly varying size of the subtype samples makes unreliable any appraisal of these data for factors of significant difference. Totaling parental loss, however, for each of the schizophrenic subtypes, it was found that 48% of the paranoid type had suffered such loss before the age of 15, 52% of the catatonic type, 42% of the simple type, 32% of the hebephrenic type, and 42% of the undetermined type.

Of the 392 patients in the group, only 12% had a history of no parental rejection and/or overprotection or parental loss before the fifteenth year.

Again psychodynamic theory would lead one to expect that the trauma of parental loss would be maximal during their early years of life, and that of the two parents, the sustained loss of the mother would be much greater and more traumatic in effect. Fisher (17) states that of all orphans in the general population, 7% were orphaned before the age of 15 years, 24% between 5 and 9, and 47% between 10 and 15. The percentage of the schizophrenic group who were orphaned at these ages is 33% in each case. While these figures show a greater incidence of

early orphanhood among the schizophrenic group than among the general population, the even distribution of parental loss by death among the 3 age groups would indicate that this trauma is not so exclusively limited to the earlier years as had been supposed. In both male and female groups the loss of the father during each 5-year period is roughly double that of the mother.

Discussion

When it is considered that of the 392 patients in this study only 12% have family histories unmarred by marked and severe parental rejection or overprotection and/or parental loss, it would seem, as Fromm-Reichmann(18) says, that a schizophrenic cannot have had a happy childhood. Instead, the conditions to which the schizophrenic has been exposed in childhood are those likely to have been associated with a maximum of anxiety and feelings of helplessness. The understanding of schizophrenia in the adult, therefore, is most likely to be enlarged by detailed inquiry into the childhood development and experiences of such persons. If this is true, then we must address ourselves to the consideration of several important questions which follow from these facts; viz, Do the presence and affectionate regard of the parent have an effect that operates to make the child more able to cope with subsequent stresses, internal and external? If so, how does this effect operate? Is schizophrenic illness a method of solution of such problems? And, if so, in what way is such a solution achieved? In short, what relevance do the data in this study have to the clinical understanding and treatment of schizophrenia?

Generally speaking, if an adult, when faced with a problem or conflict, meets it with confidence, we may infer that his attitude of self-confidence has generalized through the memory of past successful solutions of other and similar problems. If, however, a child faces a *new* conflict or problem with confidence and adequacy, we cannot make the same inference. His age and limited past experience preclude him from logically deriving his self-assurance as a generalization from a past successful coping with problems, as in the adult. Furthermore, we know that it is difficult for a child, owing to the prelogical and suggestible stage of his development, rationally and objectively to appraise himself, the world, or his place within it, without the help of others. Therefore, any sustained conception of himself, his worth, and his adequacy must be uncritically and magically absorbed from the prevailing attitudes held toward him by the significant persons in his environment, particularly by his parents.

The process presumably involved is identification; *i.e.*, an internalization, largely without logical examination, of the attitudes held toward himself by the parents, who at this stage of his development are regarded as omnipotent and omniscient. From this process, the child's conception of his self and his attitudes toward his self are seemingly derived. If his parents are consistent, understanding, and nurturant, he takes within himself their habits, values, and methods. He identifies with whatever aspects of them and of their methods of reality-testing and problem-solving which he empirically finds, by trial and error, to aid him in resolving his own problems.

If, on the other hand, the parents are vacillating, capricious, anxious, or rejecting, the child is faced with the dawning realization that, to these persons upon whom he looks as all-powerful and all-knowing, he is considered worthless and wicked, unacceptable because of some inherent, grievous, and unchangeable fault of his own. Oversolicitousness of the parent has a similar effect as rejection, because the parent's attitude implies a belief that the child will be unable to cope with the external world. The oversolicitous parent in this way reinforces the child's conception of himself as weak and worthless. In a very large family, it is likely that nurturance from the parents will be less because of the greater demands put upon them by their situation. Consequently, feelings of worthlessness are likely to grow stronger in children growing up within large families.

But of all the stresses of childhood, none could be as major and intense as that of parental death. Not only does this leave the child without a mentor or protector—and, from his point of view, a "magical helper"—

but it also serves to remove from his sphere of learning the chief object of identification from whom he may eventually gain his own sense of adequacy and merit and objective self-appraisal. The separation of a child from a parent, particularly by so final a thing as death, may be likened to the effect of death upon the integrity and morale of a group in combat, such as was observed by psychiatrists during the last war. It was noted that the relationships formed between pilot of a bomber and his crew was much like that between father and sons. If the pilot was competent and self-confident, and if he and his crew had successfully undergone together harrowing and difficult experiences, the members of the crew became strongly identified with and dependent upon him. Frequently, the crew began to look upon him as an invincible father, the visible personification and symbol of their own safety. In such groups the death of the pilot had a disastrous effect. The high morale of the group was invariably shaken and was often followed by the speedy breakdown of other crew members who seemed to reason: "If it can happen to him, this competent and invincible person, who is infinitely more powerful than I, how then can *I* hope to survive?" Just so, the attitude of the young child toward his parent is one of admiration of his strength, competence, and invincibility, as well as certitude regarding his potentiality for succor under any and all conditions, even though these feelings and beliefs are not unmixed with those of envy and hatred, especially toward the same-sex parent.

Thus, at the death of a parent, the child is prematurely confronted with the mortality and the vulnerability of the chief source of his strength and feels his own growing self threatened by possible destruction. In addition, feelings of guilt and fears of retaliation are likely to be aroused for what might seem to the child to be the fulfillment of his own covert death-wishes toward the ambivalently loved parent.

A possible conclusion that can be drawn from the high incidence of parental death found in this group, then, is that the schizophrenic illness is a method of adjustive response, a protection against strong feelings of helplessness and worthlessness. If this is so, then schizophrenic symptoms are not random and meaningless, but behavior which serves a definite need and purpose. By withdrawal from reality, the patient is able to adjust to situations or conflicts that cause him strong feelings of inadequacy or threat. The symptoms, ineffectual and destructive as they seem to an observer, enable the patient to make a fairly workable compromise with fears about himself or the world which he cannot master and needs which he cannot fulfill. Thus, schizophrenic withdrawal serves to protect the patient from further arousal of overpowering feelings of guilt and anxiety which were associated with his earlier interpersonal relations. The human needs, which are ordinarily resolved by nonpsychotics by the process of learning through "good" identification, persist unabated in the schizophrenic. His great anxiety regarding his feelings of worthiness and adequacy makes the ordinary cultural resolution of his needs difficult, so he is driven to their resolution in phantasy. The longer he practices phantasy gratification, the greater the withdrawal from attempts to master reality becomes and the more satisfying and more real becomes his make-believe world.

It would thus seem that one of the mechanisms of therapy needed with schizophrenic patients is a demonstration of consistent interest, encouragement, and regard, which would serve to reduce anxiety and guilt regarding a close relationship with real individuals in the patient's environment. Once identification with the therapist and his methods of reality-testing begins to occur, it can be used to help the patient fulfill his needs in reality. This must be the therapeutic "climate," but is not, of course, the whole of the therapeutic "work." However, within this milieu, each new success in the identification process reduces the patient's anxiety and guilt, while heightening his self-esteem, with the result that dereistic gratification becomes less necessary and attractive.

It should be remembered, however, that the factors found in this study are probably not specific for the genesis of schizophrenia. A high incidence of parental loss has been found in other groups; psychotics (19), the psychosomatically ill (20), and delinquents (21). It should also be remembered that

these same early factors do not always and necessarily produce an individual who becomes a social problem. Later influences and a shift to a better environment in the adolescent years may often counteract the earlier disadvantages of parental loss or disinterest. The working through of his anxiety and guilt may lead to a greater maturity and sensitivity than would exist in an individual who grows up under lesser stresses. Glueck and Glueck(22) have shown that deprived delinquents who form a close relationship to a parental surrogate oftentimes resolve their antisocial tendencies. It is, therefore, fairly obvious that failure to achieve adequacy in the childhood years through good parental identification is common to many disturbed populations. Dereistic withdrawal via psychosis is, then, but one of the means to handle the basic problems that touch all personality disorders. There may be factors in the life-history of the schizophrenic not studied in this particular research which are unique to him among disturbed groups and which strengthen a dereistic resolution of his problems, or, instead, there may be a constitutional tendency to respond to stress in this fashion and an environment in childhood which strengthens these constitutional tendencies. Only a great deal more intensive clinical study of schizophrenic patients and further statistical studies of this kind can help to give more complete answer to the problems which this particular mental disturbance has put before psychiatrists.

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GROUP THERAPY ON AN ACUTE SERVICE[1]

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OBJECTIVES

At the Veterans Administration Hospital, Palo Alto, California, we have now had almost 2 years' experience observing group therapy as the basic organization of a ward of acutely disturbed patients. Although changes and modifications have taken place from time to time, at its inception this program had 2 basic objectives. The primary objective was to determine the feasibility of using group therapy to reduce combative and other types of antisocial behavior among acutely disturbed patients(1). The secondary objective was to determine whether or not nurses and aides, as well as psychiatric residents, psychologists, and social service workers could be useful as group leaders. Perhaps one of the most startling aspects of this experience has been the enthusiasm with which people have abandoned their individual biases in the interest of the therapeutic efforts of the total ward. In this paper we wish to report not only our observations of acutely disturbed patients experiencing group therapy, but also what seem unique aspects of an effective program for severe psychotic patients.

HISTORY AND STRUCTURE

Though group therapy had been employed previously at this hospital, this project was unique in applying the method for the first time to an entire ward. Because of the interest of the insulin ward personnel this ward was made available for the project on July 1, 1951. The ward was 1 of 4 wings in the acute treatment building of this 1,400-bed hospital. On the ward at that time were 50 patients, who had not been selected, but had been assigned in rotation to 2 residents. No limitation on type or severity of illness was imposed. Nine small therapy groups, of 5 to 7 patients each, with one therapist, met simultaneously in 1-hour daily sessions 4 days a week. The fifth day all groups met in a combined session for 1 hour. This large group of approximately 50 patients was addressed by a speaker invited from some other department of the hospital. In all off-ward and other on-ward activities, the emphasis was placed on maintaining the identity of the group(2). These activities included daily ward rounds by resident psychiatrists, calisthenics, swimming sessions, and occasional barbecues for the group as a unit. Individual group leadership was provided by 2 resident psychiatrists, one psychologist, 2 social service workers, 2 nurses, and 2 aides, all of whom were encouraged to participate in group activities. The leaders met daily after each group session. A staff psychiatrist acted as consultant to the program.

SMALL GROUPS

The majority of our 50 patients were schizophrenics, so disturbed that their conduct was intolerable on any other ward; a few were manic-depressive patients in an acute phase, who could not be trusted on any other ward; and a few were character disorders, unacceptable except on a maximum security ward. Since the personnel initially involved were familiar with these patients, they chose the members of their small groups on a basis of individual preference. Each morning before the time set for meeting, the leader encouraged each of his patients to attend, always permitting refusal.

Providing appropriate meeting places on the ward which could be used simultaneously proved a serious problem. This necessitated the use of a corner of the dormitory, a dayroom, and the small exercise patio adjoining the ward, in addition to the available offices. Each locale seemed to have particular advantages and disadvantages to the group

[1] Read at the 109th annual meeting of The American Psychiatric Association, Los Angeles, Calif., May 4-8, 1953.

[2] The statements and conclusions of the authors are the result of their own study and do not necessarily reflect the policy or opinion of the Veterans Administration.

membership. For example, little interaction was obtained in the dormitory where patients had to sit crowded on beds. On the other hand, in the dayroom because of its size, some of the more withdrawn patients could remain on the fringe, and by tentatively advancing and retreating, were able eventually to join this group as full participtants.

During the hour which all the groups met, the doors were left open. Although originally the patients had been chosen by the leaders, they were free to leave a given group and join another whenever they wished, in the hope that they would find some meaningful relationship. From the considerable shifting that occurred, 4 general patterns emerged. First it was found that some new members tended to drift from group to group until they found one in which they felt comfortable. Second were patients who might temporarily withdraw from a group and seek another because of the level of discussion or the interaction with the leader or other patients. Most often these returned to their original group. In contrast to the latter, were those who left one group for some positive attraction in another. Fourth and last were a few who became chronic drifters for long periods before settling down to establish even minimal group attachments.

OBSERVATION: PATIENTS

We found that having the small groups meet simultaneously fostered a spirit of unity among the patients. Until they met in the small group sessions, many of the men did not even know one another's names(3). One man was heard to comment as he extended his hand to a newcomer in his group: "I've slept next to you for two months but I never spoke to you before because I didn't know whether you would like it and I was afraid of you!" As they became accustomed to the scheduling of the group hour, patients were observed reminding one another of the time, a few would encourage new members to join their group, and those least inclined to attend sometimes were motivated by the others' enthusiasm.

During the group hours there has been almost no tendency to violence among the patients. In fact only one episode has occurred during a meeting, and in this instance when 2 patients came to blows the group members handled the situation before an aide could be summoned(4). In addition there have been no physical attacks made on any of the group leaders—in or out of the groups.

With the passage of time, we noted that the complaints of the patients concerning ward administration and general management became more constructive and realistic. Although many of the suggestions offered were inappropriate, some were helpful, and as often as possible were put into effect. Among the improvements that became permanent was the addition of a bulletin board for daily announcements. Ash trays were requested, and as metal ones were not allowed, patients made wooden ones in occupational therapy and have put them into use.

Since the initiation of the group therapy program a general change in the attitude of the patients toward their fellow group members and toward the ward itself has been observed. Relationships have been formed between members of the program which have continued in several cases even after transfer to less restricted wards. Many have requested and been permitted to return for group meetings. Patients on other wings of the maximum security building have asked to be admitted to the program. It has been reported by personnel of other wards that patients expressed less fear of being transferred to the disturbed ward.

OBSERVATION: LEADERS

We originally planned that the group leaders should meet once a week, but we found ourselves spontaneously meeting daily after the small group meetings. There were several reasons for this change. Few of the leaders had had any group experience, and all had personal anxieties about the experiment. Each had been left free to try out his own ideas in his group as he saw fit, and in meeting together with other leaders, all were encouraged to operate within the limits of their own tolerance. Interest in the patients was not confined to the single hour in the morning, but was maintained by all the ward personnel throughout the day. As the leader-aides came to know their patients better, they were found to be more alert to symptoms of trouble, and frequently by talking to a patient

or suggesting hydrotherapy to the physician, serious upsets were averted. Daily incidents were discussed at leader meetings so that each had an opportunity to learn from the experiences of the others.

Other pressures and anxieties came from outside the program itself. Administrative personnel, while conservatively cooperative, had their collective and individual doubts. The nursing service had many questions: Was such a program possible with available personnel in addition to their existing duties (5)? Would not other wards suffer to provide nurses and aides for group therapy? Such problems, in addition to the therapeutic aspects of the program, required the support supplied by frequent leader meetings. This need was effectively proved when, after the program was well established we were forced to curtail the frequency of leader meetings, the program promptly showed signs of incipient collapse. It was also observed that feelings of competition between the leaders was at a minimum at times when leader meetings were frequent.

THE BIG GROUP

An additional technique employed in this study to focus attention on the unity of the whole ward was the weekly big group meeting. This meeting was attended by all 50 patients and their 9 leaders; it took place in the ward's dayroom. Guest speakers were invited from other departments of the hospital and from outside to preside over this group in whichever way they thought best. The subjects discussed ranged from theories of communication presented by an anthropologist to what happens to a patient's money in a Veterans Administration Hospital, as outlined by the finance officer. Patients reacted to this type of experience on many levels: some with a free flow of delusional material, others with pertinent inquiry addressed to the speaker, or relevant discussion among themselves. Some patients unable to verbalize in the small groups surprised us by being able to speak up in the anonymity of the large group.

Subjects frequently arose in the large group meetings which would carry over into the small groups and provide material for discussion during the rest of the week.

In this group of some 50 patients we found, as in the small groups, that we had no episodes of violent or destructive behavior during the meetings.

TRENDS

In order to fulfill the objectives of the program it was foreseen that some changes would become necessary. Being the acute and therefore the emergency facility for the entire hospital, the ward was subject to the administrative necessity of keeping beds available for admissions and transfers. We soon found that the resulting rapid turnover was disruptive to the groups and a criterion of at least one month's expected stay on the ward was established. Another factor requiring selectiom of patients was our experience with the alcoholic-character disorder type of patient. Repeatedly we found that the addition of such patients was disruptive to the predominantly schizophrenic groups. We hold no thesis as to whether or not the character disorder or alcoholic can be helped by group therapy, but only that in our experience, they did not seem to be helped in these groups, and their inclusion operated to the disadvantage of the other patients. After the program had been in operation about 9 months, we noted that some of the patients did not seem to be making appreciable progress, and a few of these were transferred to make room for others. We saw, however, that some of these patients transferred from the program promptly began to regress. Further emphasizing the difficulty in selecting patients was the occasional one who remained quiet and withdrawn for several months and then suddenly began to participate. At the present time, with these factors in mind, patients are considered for the program by the group leaders upon the request of their doctors.

There have been several excursions into dual and multiple leadership. We shall not discuss here the pros and cons of multiple leadership in regard to individual groups, but it was noted that such groups within our total program were a threat. They frequently provided their leaders with so much support that there was little incentive to participate in the leaders' meetings. Competition between the leaders of the various groups in-

creased (6), and the program tended to disintegrate into a number of small unrelated segments.

At present we are experimenting with audio-visual aids in the large group. We are also contemplating the reduced use of sedations, restraints, seclusion, and shock therapies, in relationship to this program.

CONCLUSION

After nearly 2 years in the project, it is apparent that the consistency with which change has taken place has been its most noteworthy aspect. Though on the one hand there has been little change in the purely mechanical features, there have been many changes in the patients, in the ward, and in the group leaders.

Objectively, the observer might be struck with the difference in the appearance of the ward—with the fact that the patients are using ash trays rather than the floor; or he might notice the increased socialization of the patients or the lessening of bizarre behavior. On the other hand, he might notice that the personnel present are more actively involved with the patients. Important as we believe these differences to be, something more important and at the same time more difficult to assess is the change in the patients' feelings about the ward—a change from seeing it as a restrictive and punitive setting to a feeling of "Here I can belong; here help is being offered."

Many changes have occurred in the 300 patients who have been in the program. All parts of the program have been important, one part affecting one particular patient more than another. However, we have felt that to patients who have derived deeper and more lasting gains, the interpersonal relationships were of the most significance. It has appeared to us that allowing the patient a variety in his choice of group leaders has resulted in more of these therapeutic relationships.

Collectively the patients changed enough to indicate that our first goal—control of acutely disturbed patients—has certainly been won and that our initial fears regarding violence, hyperactivity, and destructiveness have proved unfounded.

There have now been some 30 different group leaders, only one, a social service worker, having been in the program from its inception. In the beginning we valued consistency of leadership highly, and gloomily foresaw the breakdown of the program if administrative rotations occurred. We have seen the program go on relatively undisturbed by these frequent and involuntary changes. Additionally we have seen these changes provide a valuable training experience for people who, when transferred to other wards, took with them new perspectives.

We found that extra personnel were not needed, and that the existing personnel have not been hampered in the maintenance of their regular duties.

Our secondary goal has also been realized: no longer do we question whether nurses and aides can or should be doing this type of treatment.

SUMMARY

1. Group therapy when used as the basic organization of a ward is effective in controlling hyperactivity and acting-out.

2. Nurses and aides can be used both effectively and economically in such a program.

3. Providing a choice and variety of group leaders has seemed to increase therapeutic relationships.

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A PILOT PROGRAM IN POST GRADUATE TEACHING OF PSYCHIATRY TO GENERAL PRACTITIONERS [1]

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During and following World War II so much has been written on psychosomatic medicine, both in the lay and in the medical press, that much confusion has arisen over this subject. This compend is intended for an audience for the most part that has been neglected, an audience made up of those who have a daily, almost hourly need for psychiatric understanding and facility. This audience is the general practitioner of medicine and the medical specialists in fields other than psychiatry. It is they who see the early cases of psychiatric disorders. It is they whose work can be of high value in mental hygiene and it is they who must treat the majority of the psychologic problems in the community.

This quotation written by the committee on postgraduate instruction of the Tennessee State Medical Association is taken from the foreword of a handbook, the body of which was prepared by the author while teaching a course in psychiatry for general practitioners in Tennessee. It indicates the committee's purpose in presenting the course. This paper summarizes the experience of the instructor during the presentation of the program.

Since 1936, the Tennessee State Medical Association through its committee on postgraduate instruction has been presenting courses in various medical subjects to the practitioners of that state. Instructors are selected from out-of-state sources. The course in psychiatry, September 1949 to July 1951, was the first attempt to present this subject on a state-wide basis. It was selected by the medical profession of the State of Tennessee as determined by questionnaire.[2]

The program provided for a field director [3] who procured registrations, set up the scheduling of circuits, arranged for meeting places in the various centers, and handled the business of collecting, auditing accounts, and correspondence.

DESCRIPTION OF COURSE

The State of Tennessee was divided into 9 districts called circuits; in each one 5 larger cities were selected as teaching centers. These were evenly distributed throughout the circuit and could be reached by physicians in the surrounding area with the minimum of travel. Registrations were solicited in advance. The instructor held a series of 10 meetings in each center. During the first week, the first lecture was given in each of the 5 centers; in the second week, the second lecture, and so on for 10 weeks, the entire program lasting 2 years. Meetings were held in such places as staff or dining rooms in local hospitals, the parlors of the local mortician, a classroom in a school or, in the larger cities, space used by the Academy of Medicine or Health Department. Attendance varied from 6 to 132. The registration fee was 10 dollars. A record of attendance for each registrant was kept, and a certificate of completion was given to each doctor attending 8 or more of the 10 lectures.

Didactic lectures were given, including discussion of personality, employing psychoanalytic concepts, and the development of the individual personality. The clinical discussions covered the reactive behavior disorders, the psychoneuroses, principles of psychosomatics, and usually the problems of military psychiatry.

The didactic presentation was supplemented by a handbook of about 250 pages. Broader coverage of psychiatry was given in the handbook than could be done in the lectures and the handbook was distributed in the beginning of the course to be used as a supplement to the lectures.

The lectures were also supplemented by blackboard illustrations and particularly by sound films on psychiatric subjects. These were often presented first to illustrate the subject of the evening.

[1] Read at the 109th annual meeting of The American Psychiatric Association, Los Angeles, Calif., May 4-8, 1953.

[2] The course was financially supported by the Tennessee State Department of Public Health, The Commonwealth Fund, the Tennessee State Medical Association, Vanderbilt University, and the University of Tennessee.

[3] L. W. Kibler, A. B., M. A., deceased.

It was also possible in several centers to interview patients in the presence of the group, after which the patient's problem was discussed with group participation.

The instructor was called upon at various times to see patients in consultation. As many as 384 patients were seen in this way, for a minimum of an hour each, and the consultation was recorded verbatim with the patient's consent. Of this group only 2 patients refused to have an interview recorded. The consultations covered the major categories of psychiatric disturbances; the psychoses, psychoneuroses, situational reactions, character disorders, the reactive behavior disorders in children, and a few neurological cases. Many of the patients had presenting symptoms of a psychosomatic nature. The transcriptions of the interview were used with the groups to bring out certain principles of interviewing as well as the dynamic principles in the etiology of the disorder.

The program in each of the communities was publicized locally and the instructor was often called upon to give talks to lay groups. In 2 centers, a program of several sessions was organized within the school system to discuss problems of school children.

Before the opening of each circuit a questionnaire prepared by the instructor was circulated in order to determine what the individual registrants were particularly interested in having brought out in the course. At the close of each circuit, another questionnaire was circulated by the committee requesting the individual registrant's opinion as to the value of the course, what he thought of the instructor, and soliciting suggestions for improving the course.

Throughout 2 years of covering essentially the same material some 45 times, there were naturally changes made in the method of presentation. In the beginning the instructor tried to encourage the groups to meet in the evenings for the didactic part of the program and in the afternoons for case discussions of seminar type. The latter project found little response and was soon abandoned. However, it is felt that in two centers where there was reasonably good attendance at the afternoon seminar, much was gained by those who did participate.

Next, because so much material had to be covered, an attempt was made to hold the group together for a session of 3 hours in the evening, broken down into hour-long sessions with rest periods between. Presentation varied from didactic lecture to demonstration, or showing a sound motion picture. Although the attendance was good, there were many complaints that the sessions were too long. Therefore they were shortened to about 2 hours in the third circuit. Emphasis was placed upon presenting the material in as varied a form as possible, making use mainly of blackboard illustrations and sound films and relating the organized didactic presentation to these. This appeared to be a satisfactory compromise, and there was greater response in the form of questions and discussion.

The question of demonstration of patients before the group had arisen many times in the earlier circuits, and it was decided in the fourth circuit to try this procedure as a formal part of the program, at the first session of each group. The instructor did not know the nature of the problem until he met the patient at this time. This was important since his prior knowledge might put him in a position of advantage compared with those taking the course. By going into the problem "cold" so to speak, a much more convincing case could be made for the validity of psychiatric interviewing techniques. An interview usually lasted about 40 minutes and was followed by a 20-minute discussion in which the doctors could participate. The purpose was not to make a definite diagnosis of the case or to present a final opinion, but simply to point the direction for further study of the problem. At various times it was possible to refer back to the patient to illustrate points made subsequently in the course. This technique met with success and was followed throughout the remainder of the circuits.

PREPAREDNESS OF THE REGISTRANTS

In a program of this nature where specialized material is presented to people with varied interests, effectiveness depends to a considerable extent on being able to appraise the emotional readiness as well as the academic preparedness of the registrants and, then, to present the material in such a way as

to reach a majority of the group. While the registrants had voted for the subject of psychiatry, their individual intellectual and emotional preparedness was of course undetermined. The initial questionnaire to learn the physicians' purposes in taking the course was unfortunately circulated on a circuit-to-circuit basis before beginning in any one area and not on a state-wide basis before the start of the course. It was thus impossible to plan the over-all progress on a basis of accurate knowledge of the state of preparedness of the registrants.

Nevertheless, the questionnaire was of some use. It provided basic information as to the age of the registrant, his medical training, experience, and main interests in practice. It indicated that most of the registrants were looking for some practical suggestions for the treatment of patients with emotional problems. It soon became clear that the term "practical" meant some easy, quick method of using medicines or giving advice which would dispose of the patient's difficulties largely by fiat. If nothing else were accomplished the point was strongly made that emotional problems have to be solved by patients themselves, and that the physician's role is to help them dispose of those factors inhibiting effective action.

A second fact disclosed by the questionnaire was the great difference in the medical background and experience of the registrants. There was a large group of older practitioners who had little if any liberal arts education and who had gone into medicine on the basis of a couple of years' apprenticeship or an equivalent time in medical schools no longer in existence. Some had been granted licenses because they had been practicing for some time although their academic qualifications were unknown. The registrant with the longest experience had been practicing for 67 years.

There was the larger proportion who had graduated from recognized schools, received modern medical training, and who had been in practice from 10 to 30 years. However, at the time they were in medical school, there was practically no psychiatry taught except for a few demonstrations of psychotic patients. The subject matter of the course was entirely new and unfamiliar to them. Probably these first 2 groups were less well-versed in modern principles and concepts of psychology and psychiatry than the average informed layman.

Finally, there were the younger men, graduated from medical schools during the past 10 years, who had received more organized instruction in psychiatry; many of them had become appreciative of the role of psychiatry in medicine as a result of military experience in World War II.

However, when it came to fundamental interest in the course, participation in discussion, and attendance, no dividing lines could be discovered on the basis of training and academic experience. For many practitioners whose formal training might be considered inadequate, some of the material seemed to take on a richer meaning, perhaps because of longer years of practice, and a certain mellowing process which appeared to result therefrom.

These great differences in academic and medical background, basic intelligence, and capacity for empathy posed a considerable problem in selection of material. This was finally resolved by covering the major principles of modern dynamic psychiatry in the didactic part of the course, employing psychoanalytic concepts as modified in current usage. It was felt that even if the physician could not put such material to use with patients, he still should be acquainted with it as an informed person. It was felt, however, that those who would gain most from the course were in the younger age groups and in terms of their contribution to the practice of medicine their abilities and needs should be given higher priority.

RESPONSE OF THE GROUPS TO THE PROGRAM

Presentation of a course in psychiatry must take account of a factor that is at most only of minor importance in presenting other medical subjects: the material under consideration has tremendous subjective significance to the student. Phenomena and principles studied relate to and are part of the every day functioning of the individual. To the extent that the student feels threatened in his daily living, any frank and open discussion of psychological mechanisms may

produce anxiety. In attempting to understand a patient's psychological problem, the physician is faced with the question "What are the implications of this patient's difficulties for me and my life? To what degree are they common to both of us?" It is not possible to predict how a given individual will react to this threat, nor to know which aspects of the material are likely to be threatening. He may become so anxious that he is forced to withdraw from the program, or this very anxiety may serve as a strong incentive to keep him in the course. Some people, in a sense, enter such a project expecting the equivalent of a therapeutic process to take place.

The instructor was therefore faced with the alternatives of arousing in the doctors anxiety that might result in their dropping out, or, in the hope of maintaining attendance, of watering down the material in such a way as to have little practical effectiveness. This dilemma was resolved on the basis of the following assumptions:

1. The instructor could not know in advance what the particular sensibilities of the individual doctor might be.

2. Those who registered were really interested in learning as much as possible about the subject as the short time would permit.

3. It was doubtful that new material could be effectively assimilated if it did not evoke an emotional reaction in the student—to the extent at least that he began to think actively about the subject.

4. The fact that the students were, in most cases, parents appeared to have much to do with the effectiveness of the program, particularly since so much emphasis was placed upon individual development and the important role of early interpersonal relationships with the "significant others."

5. Finally, those who might drop out of the course were likely not to have gained significantly from *any* form of presentation or content, so that little actually would be lost in such cases.

It had been expected, particularly by the committee, that there would be significant resistance to the presentation of modern psychiatry if the major emphasis were placed upon psychoanalytic concepts. This was particularly true with regard to the presentation of sexual theory.

The instructor, on the other hand, was more concerned about the impact of the subject of the unconscious, and the mechanisms of defense, in general and in particular, and the operation of the super-ego, since he considered that such topics might be more anxiety-producing than the rather limited one of sex. One aspect of this problem in Tennessee was the implications of the subject matter with regard to many uncritically accepted religious notions. This issue seemed to be much more alive than the one of sex, and it appeared that many taking the course had some pet religious ideas for which they were seeking justification.

It soon became clear that the more mature, better informed, sincere students reacted favorably to unfamiliar concepts and made positive gains from the course; this group were in the majority. The bigoted remained bigoted. The unreachable were not reached.

Complete records of attendance are not available, but it probably varied from a high of 80% in some centers to about 50%. These figures are based upon the number of registrants in a center who qualified for a Certificate of Attendance. Attendance and registration were higher in small communities where most of the physicians were general practitioners than in the larger cities, Memphis, Nashville, Knoxville, and Chattanooga. In the better-organized medical communities it was a matter of local pride to register all the doctors in the county society, and make it a point to see that all were present for the lectures, save for emergencies. An additional element in holding up attendance is the fact that physicians of the state have long ago been sold on the postgraduate program and will support it earnestly even though they have no special interest in the current course.

One might expect that discussion following lectures would be a good index of interest; however, this was not so. The individual doctor was reticent about asking questions on his own. Perhaps this shyness and hesitancy have deep implications regarding insecurities existing in the relationships among the members of the profession. The instructor was always conscious of these factors, having

some advance knowledge from the field director, and made every effort to support and encourage the members. When the bars were once down, it was to the mutual advantage of all that a discussion directed to group needs could be undertaken.

Consultations offered a second opportunity for help on an individual basis. Doctors who used the instructor most regularly found that he would tend to make their office or clinic or hospital his temporary headquarters and to drop around at unoccupied times. In these informal and intimate contacts, the doctor-student felt freer to discuss problems. Many of these problems related to patients seen as consultations; others were discussed incidentally in passing. It was striking how frequently the physician's own problems would come up—personal ones or those relating to members of his family. Previous instructors had been impressed by this also.

The instructor's personality and particularly his feelings toward various individuals within the groups are important in determining his effectiveness in drawing out the interest, the deeper intellectual resources, and in general "reaching" the doctor-student. Certainly he is likely to put more of himself into any form of presentation if he feels he is being accepted and that his efforts are appreciated.

SUGGESTIONS FOR FUTURE PROGRAMS

It is clear that a course of 10 lectures, together with the other teaching techniques provided, can be nothing but an introduction to the role of psychiatry in medical practice. At best a certain number gained something (1) as parents; (2) as physicians who now might be better able to deal with the 60-80% of their patients whose troubles are psychologically determined; (3) as better-informed persons in another area of knowledge; (4) as physicians caught in the rut of traditional organic medicine whose vision has now been opened to new therapeutic possibilities; finally, (5) as physicians gathering regularly with colleagues for 10 weeks, sharing ideas and experiences.

There is an obvious need for more psychiatrists and psychiatric facilities in the state, and the fact is quite widely appreciated by the members of the profession with whom the author came into contact. Besides wanting more competent psychiatrists to whom to refer patients, a significant number of doctors want more training themselves in psychiatry. This matter was frequently discussed. The following are some suggestions as to how such training might be provided.

Further postgraduate work in psychiatry would attract a much smaller number of physicians than the present course. It would need to be longer and more intensive. Such a program would require more than one instructor—perhaps a dozen, depending upon the registration. This, plus the need for clinical material, suggests that only larger cities would be suitable. The state could be divided into from 3 to perhaps a half-dozen regions with a teaching center for each. A team of instructors could present the program continuously in one center at a time, then proceeding to the next center; or 2 or more teams could operate concurrently.

It is important that the program be full-time and presented continuously in any one center. Also it would require perhaps a minimum of 3 to 6 months to present, although there are advantages in an interruption midway for digestion and assimilation of the material covered.

The program ought to incorporate at least the following:

1. Selection of suitable applicants on the basis of previous training and experience, motivation, desire to remain in the state, and freedom from gross personality disturbance or handicap.

2. A formal didactic program, covering the standard subject matter of both descriptive and dynamic psychiatry.

3. Maximum opportunity to work with actual patients in demonstrations, diagnostic work-ups, psychotherapy under supervision, both on inpatient and outpatient basis, using material from all services of a general hospital.

4. Informal seminars in small groups to discuss the didactic material and specially assigned reading matter, and to survey the pertinent literature.

5. A program in which are discussed the more important psychological tests, the principles involved, and the indications and areas

of applicability of such tests, and the role of the psychologist in clinical psychiatry.

6. A program to present social service techniques, principles, and objectives, and to integrate these into the thinking of the participant members.

7. Training in interviewing techniques, modifying traditional medical history-taking so as to incorporate the contributions of social work, emphasizing the importance of the emotional state of the patient at the time of the interview, and his feelings as they may relate to the presenting problems.

8. Some work with children of all age groups, pointing out the differences in types of problems as well as the different interviewing and therapeutic techniques required. Particularly important would be attention to the many ways that the child-parent relationship is reflected in clinical problems.

9. Diagnostic case conferences.

10. Therapeutic case seminars.

11. Some provision for support of the student, handling anxieties that may arise.

CONCLUDING REMARKS

In spite of the stated preference of the medical profession of this state for the presentation of the program, there were many who felt that it could not be done—that the nature of the subject would defeat its reception. Another objection was that the resulting interest in the subject would likely cause such a demand for services of psychiatrists (which would not be forthcoming) that the referring physicians would be disappointed and disillusioned. The average practitioner in Tennessee is not likely to overestimate either the amount or the caliber of the psychiatric services available to him. There was much feeling, particularly toward the end of the program, that this important area of medicine had been neglected in medical school training; there was resentment that there was so much actually known in the field that had not been brought to the attention of the medical student, and that the medical schools had permitted graduates to go into practice without the equipment to handle the numerically most important problems they would encounter. There were many, particularly general practitioners, who attributed most of their unhappiness, discontent, and feelings of impotence, and even guilt feelings in their professional lives to the fact that they were so poorly equipped in the area of emotional problems and psychologically determined symptoms.

Such a situation, repeated a thousand times, undoubtedly accounts for the eagerness with which many embraced the possibility of having a program in psychiatry presented to them. It also accounts at least in part for some high and rather unrealistic expectations of what such a program could bring; and consequently some feelings of disappointment.

This is an extreme view, however, because most of those who took the course appeared to understand its real limitations, and expressed sympathy to the instructor for the job he had undertaken; but there is no question that much of the sincerity shown, the effort and sacrifices made in order to attend, as well as the determination to get as much as possible out of the program, sprang from a real grasp of the need to include techniques and principles from modern psychiatry in the daily practice of medicine.

There are no criteria to measure adequately the success of the program. Many said they learned a lot; others said they enjoyed it. Some were disturbed, and took thought; others withdrew; many were undoubtedly confused; some claimed rightly or wrongly that they had achieved a new kind of relationship to their patients or families. The most enthusiastic can be the most superficially affected; the hostile, resistant, derogatory critic may be the one eventually to gain most because he is most deeply stirred.

EXCESSIVE INFANT CRYING (COLIC) IN RELATION TO PARENT BEHAVIOR [1]

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Excessive crying or colic is common during the first 3 months of life. This crying was graphically described by Darwin(1):

> Infants when suffering even slight pain, moderate hunger or discomfort, utter violent and prolonged screams. Whilst thus screaming their eyes are firmly closed so that the skin round them is wrinkled and the forehead contracted into a frown. The mouth is widely opened . . . so as to assume a squarish form. The breath is inhaled spasmodically.

In the classic picture of colic, this crying is also accompanied by a peculiar high-pitched scream, alternate and forceful flexion and extension of the legs and excessive flatus. More commonly some of the symptoms are omitted from the syndrome.

Many etiologic factors have been suggested. These are: hunger, overfeeding, flatulence, sensitivity to allergens, poor feeding technique, improper formula, imbalance or immaturity of the autonomic nervous system or the gastrointestinal system(2), fatigue(3), failure to satisfy oral needs(4), constitutional hypertonicity, and tension transmitted from the mother either prenatally or postnatally(3). Specific treatment recommendations based on these various etiologic theories include administration of antispasmodics and sedatives(5), the use of a pacifier(4), and changes of formula or feeding technique(2).

Darwin as well as contemporary investigators such as Benedek(6, 7), Ribble(8, 9), Spock(3), and Escalona(10) have also suggested that crying is a means of discharging tension arising either from an internal or an environmental source. Numerous studies(8, 11, 12) have emphasized the importance of maternal attitudes in the personality development of the infant, but little has been documented about the communication of such maternal attitudes and their effect on behavior.

In the present study it is considered that crying is a response to distress and that the child's physiologic reactions and his environment should be investigated for causes of this distress. The mother, being the most important source of external stimulation and of satisfaction of infant needs, has been given special attention.

METHOD

Eighteen infants, 10 males and 8 females, were studied for the first 6 months of life. All were children of university students living in a student housing project. Included were 2 sets of twins and the first and second children of 3 families. In these 13 families, 9 of the babies were first-born, 8 were second babies, and one a third baby.

Initial interviews were held with 10 mothers prenatally, with 1 mother at 11 days postpartum, and with 2 mothers at 4 weeks postpartum. Prenatally the 10 mothers were interviewed at monthly intervals and were also seen several times during their hospital stay. Twelve mothers remained in the hospital for 5 days postpartum and one mother for 7 days. After the birth of the baby they were seen weekly until the child was 6 weeks old, every 2 weeks from 6 weeks to 3 months of age and monthly thereafter. The fathers were interviewed at least once.

This study deals primarily with the interaction between the parents and the infants and the assessment of this interaction as an etiologic factor in crying. Psychodynamic factors influencing the mothers' behavior

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(13) and the infants' physiologic responses (14) will be discussed in subsequent reports. A description of the mother's handling of the infant was obtained from interviews with her, from observations of her behavior during her 2-hour clinic visits, and from home visits by a pediatrician and a visiting public health nurse. The form, intensity, and duration of the mother's behavior and responses to the infant and his reactions to human contacts and other environmental factors both in the home and in the clinic were investigated.

In the clinic the baby's responses to such situations as pricking the baby's heel, separation from the mother, being left alone, and being held by the examiner were noted. Height, weight, temperature, and pulse rate were measured. Nasal mucous membrane reaction was estimated by the method described by Holmes and co-workers(15). Smears for examination of the cellular content of the nasal secretion were stained with Wright's solution. Absolute eosinophil counts were done by the method of Forsham *et al.* (16). Roentgenograms [3] were taken on arrival at the clinic and, following the ingestion of a barium solution, serial films were obtained over a 60-minute period. Muscle tension was evaluated by direct observation.

OBSERVATIONS

The frequency, intensity, and duration of crying in these infants varied widely in the first 2 weeks of life. This range extended from the rare crying of one baby, who cried only at times when his injured arm was touched, to that of 2 other babies who cried the entire first night at home. During this period 4 babies cried less than 1 hour per day, and 5 babies cried 1 to 3 hours per day. Three babies cried only from hunger the first 5 days at home, but changed in a single day and began to cry for 3 to 6 hours daily. Beginning either the first or second day at home the remaining 6 infants cried 4 to 11 hours a day.

Crying appeared at irregular intervals during these first 2 weeks. Often, from a state of apparent sleep, an infant would begin to cry intensely with accompanying reddening or mottling of the skin, blepharospasm, clenched fists, alternate flexion and extension of the extremities, increased activity, loud outcrying, irregular breathing, prolonged expiration, and increased pulse rate. Five babies held their breath at such times. Tearing was not present at this age. Quite suddenly such a crying episode would end either spontaneously or in response to maternal care.

All infants cried in this way sometimes, but it was at the end of the second week that differences in the amount of such crying were apparent. There was a spectrum in regard to frequency, duration, and intensity of crying rather than clear-cut division into abnormal crying (colic) and normal crying. However, for purposes of analysis and comparison of the findings, the infants are being divided into 3 groups: Group I, 8 infants with excessive crying; Group II, 4 with an intermediate amount; and Group III, 6 with a small amount of crying.

Group I. Excessive Crying Group.—Eight infants fulfilled the criteria of the arbitrary definition of excessive crying: episodic crying in the first 3 months of life after 2 weeks of age, over a period of at least 2 weeks, occurring at least once a day, lasting not less than 90 minutes and not related to obvious physical discomfort. The crying was not regularly relieved more than momentarily by feeding, burping, changing covers and clothing, holding, diapering, or position-changing. The crying could not be related to detectable illness.

By 1 month of age these 8 infants began to show a change from the previously described random crying to a patterning in frequency and time of day. Crying occurred often in the afternoon or evening. Five infants always cried at suppertime. Duration of the episodes varied from day to day but not with any regularity.

At 1 month these babies cried from 2 to 7 hours in a 24-hour period. Four babies cried after bathing, feeding, and diapering. Three babies cried whenever awake unless they were held and sometimes even then. Four babies cried frequently with bowel movements which were passed easily.

At this time, in addition to the previously

[3] We wish to thank the Physiology, Biophysics, and Radiology Departments of the University of Washington School of Medicine, for their assistance.

described components of crying, 7 babies showed tearing and 3 had red eyelids which persisted long after crying had ceased. Increased muscle tension was common. Nasal hyperfunction(15) and sweating appeared occasionally. During this first month of life the crying infants showed no difference from Group III, the low crying group, in behavioral response to separation from the mother, being left alone, being held by the examiner, or having the heel pricked.

By the age of 2 months, crying had increased in intensity. Sometimes there were short periods of crying following feeding, and at other times long periods unrelated to feeding. These episodes usually began with slight restlessness interpreted by the mother as evidence of discomfort and described by her as "needing to burp" or "needing to pass gas," "hiccoughing," "squeaking," etc. At such times the mother would respond immediately. When picked up, the baby would begin to cry or would cry more vigorously, and became quiet only briefly if fed. Often the baby would eat, sleep for ten minutes, wake up, fuss or cry, and be held. Sometimes he would go to sleep in his mother's arms for as long as an hour and, when placed in the crib, might begin to fuss and be picked up again. At times no amount of holding or feeding alleviated the crying.

By 2 months of age these babies had an anxious, unsmiling facial expression when awake, and often when asleep. One of them gave the appearance of having been startled whenever awake. During periods of crying, screaming occurred with or without tearing. Occasionally rocking or head-rolling accompanied the frenzied activity, and wheezing, choking, sobbing, and sweating were common. Regurgitation and passage of flatus often occurred toward the end of a crying period. Following these episodes, the babies became very inactive.

Upper gastrointestinal roentgenograms were done at 5 to 7 weeks of age. In all instances the films revealed excessive gas in the gastrointestinal tract. The films of 6 babies showed more rapid stomach emptying than did the films of any of the babies in Group III, the low crying group. Seven babies showed persistent regurgitation for 1 to 3 months, and 7 had episodes of diarrhea or constipation.

All but one of the infants in Group I showed absolute eosinophil counts at the high and low extremes of this series, most of them with marked fluctuation from visit to visit and also within 15-minute intervals during a single visit.

Nasal hyperfunction appeared frequently. All the babies in Group I showed increased muscle tension when awake.

Growth in height and weight as evaluated on the Wetzel Grid(17) showed an increase in growth rate during the crying period. After the crying ceased there was growth failure before 6 months in 4 cases.

These babies had frequent upper respiratory infections, many skin rashes, and numerous accidental falls.

When seen in the clinic during the first month, the infants in all 3 groups showed cessation of crying when held by the examiner. After 6 weeks to 2 months the excessively crying babies showed only partial reduction of crying when held. After being given phenobarbital several infants ceased crying more readily when held than when no sedative was given.

If the mothers left the room at the clinic, there was usually no observable reaction in the infants in this group although on occasion 5 of them responded to their mothers' leaving with crying or regurgitation. During the first 6 weeks these infants, if they were crying, quieted as soon as the mother held them on her return. From 2 to 6 months of age 2 infants showed no facial changes, 2 a transient smile, and 4 screamed each time their mothers returned to the room. Five infants often regurgitated shortly after their mothers' return. Two infants consistently turned their faces away from their mothers, and 3 struggled and pushed away from them when held.

Being left alone in the crib always produced extreme crying in 3 infants, but none in the other five. Crying as a response to pricking the heel for a blood count was exaggerated after 2 months and increased as they became older. With sedation 2 infants showed a decreased response in this respect.

For the first month and at various times

later, the mothers in this group, in contrast to those of the low-crying group, all demonstrated a greater amount of activity directed toward the infants. After the first month, they obviously did not meet their infants' needs promptly or adequately with behavior that would stop the crying. These mothers were never sure of what to do for their infants. They asked for frequent repeated demonstrations of simple procedures although they had all attended classes in infant care. Their anxiety increased as the babies grew older.

The infants were at times fed frequently, in one case as many as 11 times in 24 hours. For at least the first month they were all fed repeatedly in response to any evidence of restlessness, regardless of the time of the last feeding or lack of hunger cues such as sucking, mouthing, or rooting. At times they were also fed in excess of their calculated caloric requirements. The mothers alternated overfeeding with failure to feed even when the baby might have been expected to be hungry or was showing signs of hunger.

Although all of the mothers in this group tried breast feeding, all but 2 stopped before the infant was 3 months old. Weaning was rapid and in 3 cases took only 2 days. Inconsistency in the feeding pattern was further demonstrated by two mothers who alternately offered and withdrew the nipple from the baby's mouth while nursing. After 2½ months 3 of the infants were cared for and fed a great part of the time by mother surrogates. In all cases solid foods were offered before 3 weeks and were urged upon the infant or withheld irrespective of the infant's acceptance.

All of these mothers held their babies for protracted periods up to an extreme 10 or 11 hours a day in one instance. Following this prolonged holding, some mothers eventually held their infants very little, at times not even for feedings. Some alternated between the 2 extremes, the alternations occurring frequently or at widely spaced intervals. The prolonged holding was often an attempt to alleviate crying, but these mothers seemed unable to tolerate slight restlessness or brief crying before assuming that holding was necessary.

Holding was accompanied by patting, jiggling, stroking, rocking, tight holding, walking, and frequent position-changing. In 3 instances this increased activity was carried on even while the baby was being fed. Many of the infants were rocked and jiggled when they were in their cribs in an attempt to alleviate or prevent crying.

The fathers' behavior might be the same or opposite. In 2 instances the father handled the infant excessively and the mother very little. Three fathers were more successful than their wives in quieting their babies. In the clinic these same babies quieted sooner when held by male than by female personnel.

Auditory stimulation was frequent, the infants being talked to a great deal while awake and often kept in the room where family activity occurred. One infant had a radio playing in his room at all hours.

For 3 infants who received frequent enemas or suppositories, the lower bowel became another often stimulated area.

Four of the infants had avoidable accidents, and all were frequently exposed to dangerous situations because of inadequate supervision. After 2½ months, duration and frequency of crying diminished. All babies ceased excessive crying during the third month except one who continued for 4 months.

When their colicky daytime crying had ceased, the babies began to wake up during the night. This occurred after a period of sleeping through the night and persisted for 2 months or longer in all cases.

In this group outstanding in motivating the mothers' behavior were conflicts about their acceptance of the feminine or maternal role, their dependency needs, and rivalry with the child or husband. These conflicts were openly expressed by neglect of the child or overcompensated by extreme attention. The fathers were quite passive individuals who gave little emotional support to their wives. Some fathers needed to avoid close parental roles because of their distorted ideas about paternity.

Following are 2 anecdotes illustrating typical variations of maternal behavior in this group.

One mother was interviewed in the room where her 2½-month-old infant had been placed in a crib. As soon as he began to fuss, she quite anxiously

asked if she should not pick him up, to forestall his crying. On doing so she held him over her shoulder, bouncing him gently as he began to cry. When the crying continued she laid him gently across her lap and began stroking the back of his knee with her thumb. This stroking became more vigorous as the cries increased. Finally, when he did not quiet with this treatment, she patted him on the back for 3 to 5 minutes and then rubbed his neck. He was next transferred to her shoulder and with increasing crying, her rubbings and pattings increased. At this point the examiner requested the mother to busy herself with something else and took the infant, nestling him quietly. Within a few seconds the crying ceased, and the infant was peacefully sucking his thumb. The mother quickly became aware of what she had been doing to the infant and when he was returned to her held him quietly and the crying did not recur.

Another mother handled and fed her baby frequently and inconsistently in the first month. Later she often waited as long as 20 minutes after he cried with hunger, arguing with her husband as to who should get up and feed him. At night she lay in bed feeding the baby over the side of the crib without picking him up. At times the father would hold the baby for feeding and at other times he too would leave him in the crib, rocking it with his foot if the baby did not become quiet. This mother often put cotton in her ears when her baby cried but did nothing to comfort him.

Group III. Low Crying Group.—The 6 infants in this group, including twins, cried a normal amount during the first 3 weeks of life. At first these infants, in contrast to the excessive criers, almost always ceased crying when held or fed, so that by 3 weeks of age crying was related to obvious stimuli such as hunger. After 6 weeks they also stopped on seeing or hearing their mother. The character of the crying was similar to that observed in the other 2 groups.

As they grew older, stimuli such as the mother's leaving them or returning to them, being left alone in a crib, or heel prick did not produce crying to the same extent as in Group I. However, crying was provoked by stimuli of greater intensity or duration. These babies showed little muscle tension, sweating, or nasal hyperfunction. There was a regular decrease in pulse rate and pulse variability with age. There were no gastrointestinal disturbances, the roentgenograms showing little gas and slower stomach emptying. All showed normal growth-rate patterns except one who had very slight growth failure at 6¾ months. Absolute eosinophil counts showed consistent, stable counts with but one exception.

Three babies woke at night during a 2-week period and 3 babies regurgitated infrequently for a similar time. Upper respiratory infections were rare. Two frequently had mild rashes. There were no accidents in this group.

The needs of the infants were either met when expressed or were anticipated before expression. The mother's behavior in quantity and quality was appropriate to the infant's apparent needs.

The mother herself usually fed the baby, offering food only when the infant indicated hunger. These mothers accepted reassurance that the infants were gaining adequately in weight, and did not force their babies to eat.

Breast feeding was not attempted by the mothers of 2 of these 6 infants, was stopped under 3 months by one mother, and was continued beyond 3 months by three others. There was no teasing with the nipple as in the excessive-crying group. Weaning from the breast was done gradually over 3 weeks. Solid foods were offered but not forced if the infants refused them.

After the first few weeks, all of these mothers felt sure of what to do for their infants and when and how to do it. They proceeded with little anxiety in the care of the baby. Although the mother's activity with the infant was designed in part to meet her own needs, it also met those of the infant. When this was not so the mother was flexible enough to change her activity. Holding, watching, and talking to the babies occurred most often in connection with the feeding time or when the infants showed that they "wanted to play." The mothers did not cite any definite signs that meant the infants wanted to play but seemed able to sense this. Further they did not usually instigate a period of play unless the child showed a definite desire for it. When these infants were held, they were held gently and quietly. One mother often watched her child and talked to him but held him only during feedings. Otherwise these infants were not exposed to frequent auditory or visual stimulation because their cribs were isolated from the stream of household activity.

The mothers of this group reacted to hav-

ing children as the natural fulfillment of their femininity or were able to use motherhood as a means of obtaining attention and support. Conflicts about their relationship to the child were not as intense in this group as in the high-crying group. The fathers accepted their masculinity and paternity with relatively little conflict.

Group II. Intermediate Crying Group.— Four infants including twins showed frequent but not regular crying for 2 months, one crying occasionally for 4 months. They could usually be quieted by holding or feeding. All of them were fussy around suppertime for the 6-month period of observation, but never consistently every day.

These infants showed trends in behavioral and physiologic responses that were intermediate between groups I and III. Growth failure was present in one case at 5¾ months. The babies' responses to having their mothers leave or return to them were variable. Tolerance for heel prick or for being left alone in a crib was much lower than in group III and higher than in group I. One infant was increasingly inactive during her first 6 months and 3 showed average activity. This group showed no increase in muscle tension or sweating at any time. Nasal hyperfunction was present in 2 babies, and 2 others showed extreme fluctuation in the eosinophil counts.

The mothers of these infants were able to meet their needs fairly adequately, although they showed some neglect and some inappropriate and excessive stimulation. As with Group I, when the infants were either overstimulated or neglected, the crying increased.

Feeding was excessive in amount and frequency in some cases, although it was not used as a means of responding to every infant cue.

The intensity of the mother's conflict about hostility to the child was somewhat less than in Group I, although the dependent rivalry was greater. The fathers in this group resembled the fathers in Group I in regard to behavior and personality.

Discussion

Study of the personality of mothers of crying infants has contributed somewhat to the understanding of mothers whose infants cry excessively and of the mother-child relationship. An insight into the dynamics of the mother's personality alone does not help us to understand why some infants cry or how crying is mediated. To answer this question, the behavioral expression of these dynamic influences has been studied.

Aldrich(18) pointed out that the crying during the first 2 weeks of life could be markedly decreased by increasing the attention given by nursing personnel. This, he said, was because the infant's needs are being met more adequately. Ribble(8, 9) suggested that an optimum amount of contact or mothering is necessary for adequate development. Spitz(19, 20, 21) has shown that infants who receive little stimulation from their environment show the most severe retardation and that inconsistent stimulation leads to severe disturbances.

In this study the behavior of mothers of excessively crying babies was found to be extremely inconsistent in regard to frequency, duration, amount, and quality of handling and feeding, and in regard to length of time allowed to elapse before responding to the infant's cries. Thus, these mothers offered either too little or too much stimulation without appropriate regard for the infant's needs. This variation occurred not not only from mother to mother but in the same mother from time to time. The anecdotes presented showed the relationship between the infants' crying and the amount of stimulation by the mother. The crying itself provoked or increased the mothers' anxiety. They responded either by stimulating the infants and being "overpermissive," as Spitz (22) has postulated, or by being increasingly neglectful.

The earliest neonatal mother-child relationships revolve predominantly around eating and holding. In both relationships the mothers of crying babies were insecure, anxious, and tense and unable to achieve satisfaction from their performance, which was often productive of hostility, frustration, and other strong feelings. It has been shown repeatedly that alterations in feeling states are associated with body changes in adults. Therefore it was postulated that the stimuli influencing the infants' behavior arose from

alterations in the parents' feelings and that these were perceived by the infants through tactile, temperature, orienting or postural, auditory, visual and possibly olfactory sensory and proprioceptive systems.

The fathers acted to directly overstimulate or understimulate their infants or, through their presence, altered the responses of the mothers, who therefore changed their attitudes and behavior toward their children. Situational stress frequently altered the emotional reactions and behavior of one or more individuals in the home. A marked change in the reaction of one individual might alter the environmental stimuli affecting the infant and thereby influence the amount of crying.

A number of the etiologic factors suggested by others(2, 18), such as hunger, overfeeding, and feeding techniques, can be seen to represent different ways of increasing tension in the infant. Some disturbances in autonomic and gastrointestinal functions were observed in this study. As these were not apparent at birth they seem to represent part of the developing syndrome of excessive crying and no etiologic significance can be attached to them. Evidence of allergic sensitivity and constitutional hypertonicity were not found in the group with excessive crying.

In the first month all crying persisted until needs were actually met. After about 6 weeks of age, the infants in Group III responded to the presence of an adult with cessation of crying, as if in anticipation of their needs being met. Probably this was based on their previous experience of regular and appropriate need satisfaction. Infants in the high-crying group at the same age responded to the presence of an adult by persistence of or increase in crying until their needs were actually met. It appears that these infants did not develop the expectation of being satisfied because the mother's presence and behavior frequently were associated with discomfort. This is similar to the failure of development of "confidence" described by Benedek(6, 7). This lack of security in the infants who cried excessively was accompanied by greater physiologic lability than in those who cried little.

Between the third and fourth months there was a decrease in crying and the emergence of night-waking. Maturation of new modes of perception and behavior together with the mothers' continued response to any infant cue may contribute to this change in the symptom pattern.

Summary

1. The interaction between parents and infants and its relationship to crying was studied in 18 infants from 13 families.

2. Crying was found to be a response to tension which arose internally from unsatisfied needs or from inappropriate external stimulation.

3. The quantity of this tension was affected by the parent's behavior as it related to the satisfaction of the infant's needs.

4. This behavior was perceived by the infant through the sensory and proprioceptive systems.

5. The parents of babies who cried excessively responded inappropriately and inconsistently to their infants' needs with overstimulation or with relative neglect.

6. The infants who cried excessively did not develop security in interpersonal relationships to the same extent as those who cried very little.

7. In addition to excessive crying these infants demonstrated deviations such as: regurgitation, night-waking, growth failure, nasal hyperfunction, increased muscle tension, variability in gastrointestinal functions and absolute eosinophil counts. They also had frequent illnesses.

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SCHIZOPHRENIA AND SOCIAL STRUCTURE[1]

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Introduction

In 2 previous papers(9, 16) the authors reported that the number of neurotics and psychotics under the care of psychiatrists is significantly related to the patients' social class.

The data for these reports were assembled from the New Haven, Connecticut, community by a research team [3] composed of psychiatrists, sociologists, and a clinical psychologist. As the methodological procedures used were described in the previous papers, we shall mention here only the principal research operations. First, the class structure of the community was delineated by the sociologists; second, they interviewed, as controls, a 5%-sample of the community's population; third, the team took a census to determine who was receiving psychiatric care on December 1, 1950; fourth, both the sample population and the psychiatric patients were placed in their appropriate class by the use of *Hollingshead's Index of Social Position.*

The population under discussion is composed of all patients diagnosed as schizophrenics and paranoids legally resident in the New Haven community who were in treatment on December 1, 1950. This group comprises 44.2% of all patients, (847 individuals out of a total patient population of 1963) and 58.7% of the psychotics in our psychiatric census. Of *these* patients, 97.6% had been hospitalized at one time or another, and 94% were hospitalized at the time of our census.

Of the many items in the carefully constructed psychiatric and sociological schedule used in our psychiatric census, we shall discuss only the following: (1) a comparison of native and foreign-born schizophrenics with the total population in the community; (2) place reared for native-born schizophrenics by class: (3) evidence of social mobility of schizophrenics and their families by class; (4) age at first contact with a psychiatrist, and at the date of the census; (5) duration of the treatment in each class; (6) the source of referral for schizophrenics by class; (7) hospital and ambulatory treatment by class; (8) mean number of hospitalizations by class; (9) types of therapy schizophrenics received who had been in treatment for less than 5 years by class.

The association between social class and prevalence of schizophrenia in the community's population was measured by an *Index of Prevalence* so constructed that if the number of patients in a class was proportionate to the total population of the class in the community the index would be 100. Instead of an equal distribution of patients by class the following pattern was found. In class I the index figure was 23; in class II, 33; in class III, 48; in class IV, 84; and in class V, 246. This distribution posed the question we shall discuss here, namely, how can these differences be explained?

Discussion of this problem gave rise to the formulation of 2 tentative explanatory hypotheses: (1) Schizophrenic patients are downwardly mobile; hence the concentration of patients in class V. (2) The class differences in the *Index of Prevalence* reflect differences in treatment and rehabilitation.

Presentation of Data

Hypothesis I: Downward Mobility.—We first approached the problem of the wide difference in prevalence between the several classes from the viewpoint of mobility, because this has been a controversial point in both psychiatric and sociological literature for many years. Our data enabled us to examine mobility from the standpoint of both geographic movement and movement within the class structure. Our examination of the

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mobility hypothesis was divided into 4 steps. First, the native- and the foreign-born patients were compared with the corresponding population of the community to see if there were a significant relationship between foreign birth and schizophrenia. The results are given in Table 1.

TABLE 1

NATIVE-BORN AND FOREIGN-BORN SCHIZOPHRENICS ABOVE 21 YEARS OF AGE COMPARED WITH TOTAL POPULATION IN THE COMMUNITY ABOVE 21 YEARS OF AGE

	Schizophrenics		Population	
Nativity	No.	%	No.	%
Native-born ...	643	76.9	135,568	79.5
Foreign-born ..	193	23.1	34,900	20.5
Total	836	100.0	170,468	100.0
$p > .05$ $x^2 = 3.4871$				..

The data in Table 1 were tested by the chi square technique and no significant differences appeared between the native- and foreign-born categories. The second step was a comparison of where the native-born patients had been born and reared. These data are summarized in Table 2. The low chi square for Table 2 shows that there is no significant relationship between schizophrenia by class and place-born and place-reared for the native-born patients.

The third step was an examination of the residential histories of the patients who had been born and reared in the community. This operation showed that the class I and II patients had lived in the "best" residential areas all their lives; and the class V patients had always lived in New Haven's "slums." The other classes were more widely scattered, but there was no perceptible movement of patients and their families from the better to the poorer residential areas.

By social mobility we mean actual movement from one class to another, not "mobility aspirations" or slight intraclass changes through the years. Movement within the class structure was tested by an exhaustive examination of the family histories of all patients to determine if their class position were the same as or different from the family of orientation. The patient's class position at the time of his first contact with a psychiatrist, as well as at the time of his present hospitalization, was noted. The results of our comparison of the class positions of patients and of their families in 2 generations are summarized in Table 3.

TABLE 2

PLACE REARED FOR NATIVE-BORN SCHIZOPHRENICS BY CLASS

	Class							
	I & II		III		IV		V	
Place Born and Reared	No.	%	No.	%	No.	%	No.	%
Community	12	44.5	51	63.8	212	70.4	153	61.2
New England	7	25.9	14	17.5	49	16.3	46	18.4
United States	8	29.6	15	18.7	40	13.3	51	20.4
Total	27	100.0	80	100.0	301	100.0	250	100.0
$p > .05$ $x^2 = 11.8971$								

TABLE 3

EVIDENCE OF SOCIAL MOBILITY AMONG SCHIZOPHRENICS THROUGH TWO OR MORE GENERATIONS BY CLASS

	Class							
	I & II		III		IV		V	
Evidence of Mobility	No.	%	No.	%	No.	%	No.	%
Patient upward from family.....	7	24.0	19	22.9	6	1.7	..	0.0
Patient downward from family.....	1	3.0	2	2.4	3	0.8	4	1.0
Patient and family stable.....	20	70.0	54	65.1	332	91.5	340	88.8
Insufficient family history.....	1	3.0	8	9.6	21	6.0	39	10.2
Total	29	100.0	83	100.0	352	100.0	383	100.0

These data (Table 3) furnish little evidence of downward mobility. The significant facts here are: (1) that 91% of the patients were in the same class as their parental families; and (2) there is much greater mobility upward than downward within the small minority who do change their class positions. Clearly the data do not support the hypothesis that downward mobility can account for the high concentration of patients in class V.

Hypothesis II: Differences in Treatment. —The hypothesis that differential responses to treatment might be an explanation of the disproportionately large number of cases in class V was stimulated by our analysis of the ages of the patients at the time they first came into psychiatric treatment in comparison with their present ages. We were impressed by the fact that the upper classes reach a psychiatrist earlier in life than the lower ones. But what started us on the trail of an analysis of the treatment process was the finding that the present mean ages of the patients in the different classes were so different from their ages at first psychiatric contact. For example, the differences between mean age at first contact and present mean age in classes I and II (Table 4), is only 11 years, whereas in class V the mean age difference is 17 years. Briefly, this increased differential suggested an accumulation of chronic patients in the lower classes.

After we found the wide differences between age at contact and present age, we constructed an index of prevalence by duration of psychiatric contact. This index is constructed in such a way that if each class were proportionately represented in the patient group by duration of contact the index figure would be 100. The crucial data bearing on duration of professional contact with psychiatrists are presented in Table 5. If the duration of contact, *i.e.*, treatment and care, in all classes were equal through the years, the index should be the same as current prevalence given at the bottom of Table 5.

Instead of a stable index by duration of treatment we found a highly variable set of figures. The index numbers for patients in treatment for less than a year are inversely proportional to class. In class V the proportion of patients in treatment for one year or less is twice as high as in classes I and II. But at the other extreme of the table, that is, patients under care for 21 years and more, the index is 31 times higher in class V than in classes I and II. Furthermore, there is a steady decrease in the index numbers as treatment lengthens for all classes except class V. In class V the index increases steadily from the second year. The data of Table 5 show clearly that class V is a reservoir of chronicity.

We examined the treatment process for clues to help us understand the accumulation of chronic patients in class V. Because of space limitations we shall present only selected data from this phase of the analysis.

Table 6 compares referrals of patients to psychiatrists and psychiatric agencies by class. That schizophrenics of the upper classes were referred for treatments predominantly through medical channels, while schizophrenics of the lower classes are referred by legal authorities such as police, criminal, and probate courts is impressive. Likewise, the fact that referrals through social and educational institutions and through the initiative of private individuals are comparatively rare is a surprise.

Since a very large proportion of chronic patients in classes IV and V receive only custodial care, we tabulated types of treatment for 5 years' duration and less by class (Table 7). We found that the "no treat-

TABLE 4

MEAN AGES OF SCHIZOPHRENICS BY CLASS AT FIRST PSYCHIATRIC CONTACT AND AT PRESENT

Class	Mean Ages	
	First Contact	Present
I & II	29	40
III	31	44
IV	32	45
V	33	50

TABLE 5

INDEX OF PREVALENCE BY DURATION OF TREATMENT IN EACH CLASS

Years in Treatment	I & II	III	IV	V
1	84	43	102	176
2	102	52	105	144
3–5	26	71	101	175
6–10	25	60	101	194
11–20	26	20	86	280
21 and above	10	40	70	308
Current Frevalence	29	48	84	246

TABLE 6

SOURCE OF REFERRAL FOR SCHIZOPHRENICS BY CLASS

Source of Referral	I & II		III		IV		V	
	No.	%	No.	%	No.	%	No.	%
Medical								
Psychiatrist	4		2		4		6	
Psychiatric Clinic	..		3		12		1	
Psychiatric Hospital	7	55.2	7	24.1	25	13.9	37	12.3
Physician	5		7		7		3	
Medical Clinic	..		1		1		..	
Legal								
Police or Court	1		3		52		105	
Probate Commitment	7	27.6	55	69.9	233	81.0	224	85.9
Social Agency and School	1		..		5		3	
Self, Relatives, Friends	4	17.2	5	6.0	13	5.1	4	1.8
Total	29	100.0	83	100.0	352	100.0	383	100.0

TABLE 7

TYPE OF THERAPY FOR SCHIZOPHRENICS IN TREATMENT FOR 5 YEARS AND LESS BY CLASS

Type of Therapy	Class I & II		III		IV		V	
	No.	%	No.	%	No.	%	No.	%
None			3	12.5	7	7.8	7	12.3
Organic	2	16.7	13	54.2	59	65.6	40	70.2
Psychotherapy								
Individual	10	83.3	4	16.7	16	17.8	5	8.8
Group	..	0.0	4	16.7	8	8.9	5	8.8
Total	12	100.0	24	100.0	90	100.1	57	100.0

$p < .001$ $\quad x^2 = 38.9143$

ment" category is absent in classes I and II. Organic treatment and custodial care are more frequent at the lower class levels. Individual psychotherapy is concentrated disproportionately in classes I and II; whereas group psychotherapy is limited to the 3 lower classes.

Table 8 demonstrates that schizophrenics in the higher classes are hospitalized, on the average, a significantly greater number of times than the lower-class patients. This is additional proof that the chances of an upper-class schizophrenic leaving a mental hospital are better than those of a lower class schizophrenic.

TABLE 8

MEAN NUMBER OF PSYCHIATRIC HOSPITALIZATIONS BY CLASS

Class	Mean Number of Hospitalizations
I & II	2.7
III	2.2
IV	2.0
V	1.7

From Table 9 one may conclude that schizophrenics of the upper classes are more likely to be treated as ambulatory patients before they are hospitalized than those of the lower. Also lower-class ambulatory patients are more likely to break contact with psychiatrists and psychiatric agencies than are higher class ones.

DISCUSSION

Our data show significant class differences in the prevalence of schizophrenics in the New Haven community. But are these differences valid? Clearly they are valid for our population; but whether they would hold in a true prevalence study, rather than a treated one, is a moot point. Actually only an epidemiological study of prevalence in the total population, or a large stratified sample, could answer this question decisively. Lemkau and Tietze(11) in their review of this problem, and Bellak(1) in his survey of the literature, point out that no such survey exists.

TABLE 9

SCHIZOPHRENICS' EXPERIENCE WITH TREATMENT BY CLASS

Treatment Experience	Class I & II No.	I & II %	III No.	III %	IV No.	IV %	V No.	V %
First Admission to Hospital	3	10.3	22	26.5	126	35.8	214	55.9
Readmission to Hospital	14	48.3	45	54.2	182	51.7	153	40.0
Ambulatory Treatment Before Hospitalization	6	20.7	3	3.6	18	5.1	9	2.3
Ambulatory Treatment After Hospitalization	5	17.2	8	9.6	18	5.1	1	.3
Ambulatory Treatment; No Hospitalization	1	3.4	5	6.0	8	2.3	6	1.6
Total	29	99.9	83	99.9	352	100.0	383	100.1

$p < .001 \quad x^2 = 102.0021$

Data collected by Brugger(4), Braatoy(3), Dayton(6), Landis and Page(10), and Malzberg(13) do not provide us with prevalence data on a total population.

Although our data deal primarily with prevalence in a population under psychiatric care, we feel justified in assuming that class differences in the schizophrenic group might hold in a true prevalence study for these reasons: First, class differences in the incidence of acute schizophrenia are so marked that the chance is that these differences are not fortuitous (see Table 5). We do not believe that we overlooked the large number of cases in classes I and II which would be necessary to explain the differences we have found; neither can we assume that the number of schizophrenics in the higher social classes who do not enter treatment would equal the proportion we found in class V. Second, schizophrenics in the upper classes who have entered treatment are less prone to break contact with a psychiatrist than lower-class patients. It is with the lower-class patient that treatment contact breaks unless the patient is hospitalized.

The low index of prevalence in class III is of great interest, but we can only speculate as to its meaning. It has been suggested that in classes I and II families seek treatment for mentally ill relatives; in class V, on the other hand, schizophrenics get entangled with "the Law." Neither condition prevails in class III. Possibly, the stable conditions of living in class III may be of some significance.

If we view the data in Table 5 from the perspective of approximate incidence we are still faced with the task of explaining why class V has an index figure approximately twice that of classes I and II. Although we have no answer to this question, one might speculate that certain factors in lower-class living are responsible. The best-documented proposition in support of this has been made by Faris and Dunham, in their pioneering study of *Mental Disorders in Urban Areas.* These authors contend that lower-class living fosters social isolation by faulty socialization in childhood. The broken home and related phenomena of disintegration have been mentioned as causal factors by some authors (12, 8) and disclaimed by others(7). In our opinion these studies did not have adequate controls, though we agree with some of the theoretical statements(12). We hope to publish later relevant data bearing on this problem. However, we believe that this finding no more explains the etiology of schizophrenia, than dirt the occurrence of *acne vulgaris.* The cause, or rather causes, of the disorder remain obscure(15).

A second question arises: What possible explanations can be given for the class differences we have found in the treated prevalence of schizophrenia? We have no definite answer, but from our material it is clear that the patient population of New Haven is not geographically mobile; and immigrants are not more frequent among our patients than in the total population of the community. These findings are different from those of Malzberg(13) and of Braatoy(2). However, our data corroborate the position of

Faris and Dunham that the schizophrenic is not mobile downward. Furthermore, there is little evidence of a drift into socially and economically underprivileged areas; rather we have significantly more upward than downward mobility among our patients.

Clearly there is a concentration of chronic patients in the lower social classes, particularly in class V. But why? Certain tentative conclusions may be drawn. First, schizophrenics in class I enter treatment earlier. This early treatment may be extremely important, especially if the upper-class schizophrenic receives better treatment than the lower-class one. Second, the upper-class schizophrenic enters treatment through medical channels; the lower-class schizophrenic through legal ones. Stated more dramatically: the upper-class mental patient rests on a therapist's couch, the lower-class one on a prison or hospital cot. Like Cameron(5), we were impressed by the dearth of self-referrals or referrals through social and education agencies among the lower class patients.

Treatment is markedly different in the upper and lower classes. However, the differences during the acute phases of the illness are less marked than in the more chronic stages. Nevertheless, a relationship to class exists even when acute schizophrenics in one particular institution are compared by class (18). The most striking difference is the administration of psychotherapy to upper-class schizophrenics and the lack of any systematic treatment of chronic lower-class schizophrenics.

Once in a mental hospital, the lower-class schizophrenic is less likely to leave permanently; he rarely has more than one chance in the community. If he does not make the grade he becomes a permanent resident of the institution. This fact, coupled with more or less impressionistic observations, particularly in studying rehabilitation of lobotomized patients(3), makes us assume that the role of the community and its most important unit, the family, is of enormous importance in determining who stays in a hospital and who becomes reintegrated with the family. We believe that forces operating within the family are as powerful a determinant for social recovery as early case finding and the right type and quality of treatment. An impressive story illustrating the importance of the family for rehabilitation of its mentally ill member was told in the *New Yorker* by E. Newhouse. The combination of late case finding, inadequate treatment, and serious obstacles in rehabilitating the lower-class schizophrenic into an already poorly integrated family may account for the increase of chronic patients at the lowest class level. More research into prognosis (17, 19), and, particularly, into the factors determining rehabilitation into the patient's family are very important.

In short, our second hypothesis that the current distribution of schizophrenic patients reflects class differences in the processes of treatment and rehabilitation as well as in responses to treatment, seems valid. Implications of this conclusion for better case finding, better treatment in our mental hospitals, and the intelligent use of rehabilitation techniques are obvious for psychiatry, social work, and public health administration.

Summary

In a previous report the authors and their co-workers found treated prevalence of schizophrenia in the lowest social class 11 times more frequent than in the upper class. The present paper analyzes this striking distribution. From our data it may be concluded that the difference is not due to downward social mobility. Tabulating approximate treated incidence of schizophrenics (patients in treatment for less than 1 year) we found that approximately twice as many schizophrenics occur in class V than in classes I and II combined. At the more chronic levels the ratio between upper- and lower-class schizophrenics is much higher. We found 31 times as many schizophrenics in class V as in classes I and II. This increase of chronic patients in class V appears to be related to significant differences in treatment. Our data demonstrate that schizophrenics in the upper and middle classes enter treatment earlier than those in the lower class. The upper- and middle-class schizophrenic is referred for treatment through medical channels; the lower-class schizophrenic through legal ones.

The schizophrenic of the upper and middle

classes is more likely to be treated by psychotherapy; the lower-class patient by organic treatment and, in far too many cases, he is not treated at all. The patient in the upper and middle classes has a greater chance of being discharged to his family and community than has the lower-class schizophrenic. Implications of these findings for the pathology and therapy of schizophrenia need to be discussed more thoroughly than space allows us here.

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A NEW EMPHASIS IN MENTAL HEALTH PLANNING[1]

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Recent consultation work in connection with surveys of mental health needs and resources in various states have caused the authors to examine critically prevailing emphases in long-range program planning for mental health. It is contended that current planning overemphasizes patchwork solutions, and that the scientific advances of the profession of psychiatry justify a drastic shift of emphases to dynamic programs that bear promise of lessening the burden of mental illness in the foreseeable future.

Briefly, commonly listed elements of present-day planning include the following: relief of overcrowding by expanding facilities; projection of a certain number of beds on the basis of an assumed desirable ratio of beds to population; replacement of condemned buildings, firetraps, and obsolete equipment; provision for and use of more public space for patient activities; early intensive treatment; application of group therapy and social approaches; establishment of clinics and community services, such as day hospitals, sheltered workshops, mental health centers, etc.; and finally, over-all stepped-up programs of treatment, training, and research.

A review of the relative success in establishing these different elements in recent years reveals capital appropriations for new buildings far in the lead. A recent survey by the APA Mental Hospital Architectural Study has brought to light a most impressive amount of new construction in the past decade—complete new hospitals, intensive treatment buildings, special units for tuberculosis and the aged, modern laundries, central heating plants, kitchens, medical and surgical departments, and so forth.

Progress in acquiring personnel, the *sine qua non* of a dynamic program, pales by comparison. To be sure, some salaries have been raised, ratios of personnel to patients have improved in several states; some clinics have been put into operation, largely with part-time staffs; over-all expenditures for food and maintenance have increased (along with the cost of living); several notable research projects have been launched, but no progress, in comparison with capital expenditures, has been made in securing the personnel essential for effective use of the new facilities, let alone development of the essential nonhospital elements of a dynamic long-range program.

At the same time the public ever demands more psychiatric services. By supporting enormous capital investments for mental hospitals, people have demonstrated their growing understanding of the financial and social cost of mental illness, their eagerness for the advancement of scientific knowledge in this field, and their willingness to support programs to make it possible.

The time seems ripe for preparing an over-all attack that will get in front of the problem, to launch aggressive programs bearing promise of checking the mounting load of hospitalized mentally ill.

Campaigns in behalf of great public health problems such as tuberculosis, poliomyelitis, cancer, heart disease, and venereal diseases have been so successful that the tools necessary to conquer them seem assured. Mental illness, on the other hand, looms larger each year. There is indication that now is the time to strike out more aggressively in behalf of dynamic programs that tackle the mental health problem at its roots.

Very simply, the objectives of a mental health program are treatment, prevention, and the maintenance of health. The tools used to achieve these objectives are (1) buildings—hospitals, clinics, and space; (2) treatment techniques, knowledge, and technical equipment; (3) personnel.

It has been demonstrated that appropriations for buildings can be obtained. Support for research has gained modest, though entirely inadequate, success. But thus far, as measured against the actual need, success in

[1] The opinions contained herein are the author's and should not be construed as official statements of the A.P.A.

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obtaining really adequate staffs to operate psychiatric facilities has been virtually nil.

Why money for buildings is so relatively easy to obtain can only be surmised: they are tangible, good to look at. In our culture, buildings are generally viewed as monuments to progress. We presume that if a building looks good something worthwhile must be going on inside it. Buildings are "non-recurring" items in the budget, in the sense that they may last a century. The "worship" of buildings is, of course, not peculiar to our culture. It is perhaps a world-wide quirk of human nature to make financial sacrifices for all kinds of public service structures—schools, churches, temples, government buildings, hospitals—and at the same time that turn a deaf ear to staffing them for efficient operation.

Whatever the explanation for the phenomenon the question arises whether leaders in our field have not fallen victim to it. Have we not unconsciously given in to building programs as the easy way out?

It is not a new idea that the key to success in dealing with mental illness lies in people. No one will disagree that personnel is the common denominator of all treatment programs. What demands our immediate attention is that we are in danger of losing the battle against mental illness by default, if we do not marshal the facts, formulate and back up hypotheses that will support a primary stand for adequate personnel. To the extent that we settle for more physical facilities without personnel to operate them we work under a presumption of pessimism.

Everywhere one hears reflections of this presumption of pessimism in conversations with colleagues. Why ask for money for personnel when the personnel isn't available anyway? Improved services, they say, will not reduce but increase the hospital population. There are not sufficient incentives in public service to attract good personnel. There are far more residency vacancies in our training centers than people to fill them. APA standards for personnel in hospitals and clinics are called "idealistic"; others say, "no legislator will listen to them," or, "they can never be reached."

The same spokesmen will, however, speak with utmost confidence of the feasibility of launching a $25,000,000 construction program over the next 5 years. We suggest that this is comparable to fighting a 3-front war on one front.

Cries of despair to the contrary, we contend that psychiatry, like other medical specialties, has matured to the point where it is imperative to say boldly to the people: Give us the tools and we will carry out a program that will lessen the burden of mental illness to the nation.

There are reasons enough to make such a presumption of optimism: we know that discharges from mental hospitals are directly proportional to the size of their staffs. We know that there is an enormous lag between our present scientific knowledge of therapies and their application in the hospitals. We know that hospitalization can be shortened by early intensive treatment. We know that thousands of hospitalizations can be avoided, postponed, or shortened by establishing lines of defense in the communities—*i.e.*, clinics, half-way houses, sheltered workshops, rehabilitation agencies, community mental health centers, and the like. We know, as scientists, that research has and will continue to pay off. We know that psychiatry is rapidly maturing to the point of general acceptance as a basic medical science.

A new emphasis in program planning will not mean casting aside efforts to obtain adequate, safe, well-planned buildings and space, but it would involve an immediate shift in favor of vastly expanded personnel. It would involve acceptance of the fact that the long-range answer to overcrowding is not to be found in buildings but in personnel.

Space does not allow for amplifying the details of a bold new program, but it may be pointed out that manpower in the United States and Canada is not in short supply. Our problem is to divert sufficient of it to meet mental health needs. What is here proposed is that leaders in the mental health field dare pronounce and seek support for a program that will tackle the problem on all fronts at once.

This would involve such basic elements as the following:

1. An immediate plan to double or triple the number of aides and attendants in all public hospitals.

2. An over-all plan to bring all categories of personnel in the hospitals up to APA standards within 6 years, with emphasis on doing as much as possible in that direction in the first 2 years.

3. A plan for an all-out education program reaching into the secondary schools, colleges, medical schools, and other basic training centers to draw people into medicine and related professions and eventually into the mental health field.

4. A recruitment effort backed by solid inducements of salary, professional opportunities, and the essentials for good family living that will attract and hold efficient staffs.

5. A plan for subsidizing university and medical schools to enable them to carry out a vastly expanded training program in all categories.

6. Providing for literally thousands of training fellowships covering all professional categories, a significant number in the first year while training facilities are being prepared, and advancing to the maximum needed within 3 years.

These proposals may strike some as "unrealistic." The authors contend that true realism lies in facing the fact that our present rate of progress fails to keep pace with the acceleration of the need. The contention is put forward that only a reorientation centered on personnel will give real hope for the future. Public support for adequate personnel hinges on confirmation by the profession itself of this premise.

CORRESPONDENCE

Editor, AMERICAN JOURNAL OF PSYCHIATRY:

SIR: In the November 1953 issue of the American Journal of Psychiatry, page 399, is a review of the book *Broadmoor: A History of Criminal Lunacy and its Problems,* by Ralph Partridge, London, 1953. The reviewer criticizes the author for misspelling the name "McNaghten."

The reviewer, as do Zilboorg(1) and Overholser(2), seems to prefer the spelling *M'Naghten.* However, a search of contemporary sources convinces me that the proper spelling is *McNaughten,* or possibly *M'Naughten,* and that the contraction *M'Naghten* is incorrect.

The original report of the trial(3) gives the spelling *M'Naughton;* contemporary newspaper accounts of the trial(4) and a contemporary account in an English legal journal(6) use the spelling *M'Naughten;* the report of the first trial in the United States in which the rules were applied(5) and Isaac Ray's discussion of the trial(8), *McNaughton;* the first report of the rules in an American medical journal(7) *McNaughten.* Further, I am in possession of exact transcripts of the hospital records of McNaughten from both the Bethlem Royal Hospital and the Broadmoor Institution. In their records the spelling is also *McNaughten.*

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In a communication dealing with this matter Dr. Winfred Overholser states:

"Clark's *Criminal Law,* Davidson's *Forensic Psychiatry,* Sheldon Glueck in *Mental Disorder and Criminal Law,* Stephen's *History of the Criminal Law of England,* and Sir Norwood East spell the name *McNaghten.* Weihofen spells it *M'Naghten.* Townsend, in his *Modern State Trials,* which reports the entire case, spells the name *M'Naughton.* Just to add to the confusion, Sir Norwood East occasionally spells it in his writings *MacNaghten.* The last word seems to have been spoken in the final report of the Royal Commission on Capital Punishment in a note at the foot of page 75, which I quote:

'There are at least 10 variant spellings of this name. We found it convenient to adopt throughout our proceedings the form [M'Naghten] used in the Report of Clark and Finelly (10 C. & F., p. 200), which was followed in the memorandum submitted by the representatives of the Home Office who appeared as the first witnesses before us. In the earliest Report of the case, however, (4 State Trials, N. S. 847) the name is given as "Macnaughton," and we are informed by the Clerk of the Central Criminal Court, who has been good enough to examine his records of the case, that it was spelt in almost the same way in the Coroner's Inquisition ("McNaughton"), and in the Indictment ("MacNaughton"), and that the original depositions show that the accused himself, in signing the statement he made, after statutory caution, to the Magistrate on committal, spelt his own name "McNaughton." It may therefore be thought that this form has the strongest claim to general acceptance.'"

Not knowing the state of literacy of the accused in this case, and therefore whether he always spelled his name in the same way, we are inclined to retain the spelling used in the review of *Broadmoor,* and which was adopted by the Royal Commission on Capital Punishment in their final report.

PRESIDENT'S PAGE

More interest. . . . More communication. . . . More interchange of thought. . . . More help—in the form of criticism or suggestions. . . . More letters—to the President, the Medical Director, or committee chairmen.

Surely there are many things on your minds about psychiatry. Write about them to us—your officers and councilors welcome help and suggestions.

Our "psychiatric travelers" report great anxiety throughout the country—especially among the administrators and personnel of state hospitals. When they hear of resignations and crises in mental hospital administration in various parts of the country, they become alarmed about the possibility of political interference with the administration of public mental hospitals. The new drive for economy threatens to embroil the state hospitals in party politics. The patients and their families, of course, are the ones who suffer most. Doctors, nurses, social workers, psychologists, and their associates cannot do good work in a hospital where there is not a reasonable amount of security and an atmosphere conducive to good public relations among themselves and their superiors in the state administration. Care and treatment suffer. Anxiety interferes with performance. Morale becomes low. A good hospital abhors politics. The best public mental hospitals are in those states that have given professional hospital personnel status and tenure, and protected them from the ebb and flow of political change and preference.

Frankly, there has been disappointment in the last year or more at the small number of letters that have come to the officers of the APA protesting these circumstances, urging action on the part of the Association, and suggesting courses of constructive action.

Periodically, state mental health programs disrupt. Immediately there is skyrocketing of professional resentment and exasperation. There is public confusion. The ejaculations are temporary. There is little that can be constructively accomplished in the heat and fog of suddenness, recrimination, and confusion.

What can be the contribution of our Association in these circumstances? We register disapproval. We send restrained telegrams to governors expressing dissatisfaction and offering to give help. We express sympathy to our colleagues. We try to arouse the public to action. But this is all too soon gone with the wind.

These are phenomena we have observed to recur repeatedly in the history of psychiatry in the United States. What is indicated is not just transient outbursts of emotion and indignation. We need light as well as heat. A systematic study of the conditions and factors leading to breakdowns of state mental health programs is needed. The attack on this problem should be a planned, systematic study or research into the factors making for successful mental health programs and those making for crisis and breakdown. Patterns of breakdown seem to repeat themselves. Recurrent phenomena *can* be studied. Are the chief factors of breakdown change of political party, or politics, or is it difficulty in public and personal relations on the part of directors or superintendents? Such a study cannot be properly done by the governmental authorities involved, nor should it be undertaken by local societies interested in mental health. These are not parochial problems but national ones. Just as the Flexner Report on Medical Education improved tremendously the quality of medical education in this country, and the study and inspection of hospitals by the American College of Surgeons improved the quality of hospital service, so could such a study advance the effectiveness of mental health programs in our states. This should be done over the course of 5 or 8 years by trained sociologists, perhaps political scientists. We need a Flexner Report or a Commonwealth Report on mental health administration in this country.

What are your suggestions for this "tragic problem"? Letters to your officers and committees will count. Surely there is combined wisdom in this great body. Won't you help tap it and express it?

I still think we ought to devise a means of honoring men in our Association who have made significant contributions to psychiatry and who have not had the fortune of being elected president. Methods should be developed for using their wisdom and ability to help the President in his public relations, in his travels, and in his interpretation of policy. An added advantage would be that the membership could hear these men and meet them when they address meetings in various parts of the country. "Two Presidents" did not seem to be a satisfactory designation. How about Presidential Chancellor or Honorary Chancellor of the APA for the year 1954?

We need vocal leadership, not sporadic assaults. We cannot leave this work to Dan Blain, George Stevenson, Bob Felix, the Menningers, Lawrence Kubie, Leo Bartemeier, Ewen Cameron, John Whitehorn amongst others. We need more national coordinated leadership. My idea of Presidential Chancellor for the year would help in this.

There will be meetings of committees from the APA, the AMA, and the American Psychoanalytic Association, to prepare a statement on psychotherapy. This will include the problem of collaborative psychotherapy by nonmedical personnel. Surely you have some thoughts on this? May we hear from you?

COMMENT

GROUP THERAPY

That the group influences the individuals who compose it is one of those truisms which we may class as a banality. Such influence may be regarded as pernicious or in some way threatening to one's peace and comfort, and the excuse that "he was led astray by bad companions" is probably one of the first alibis ever recorded. Here we may be giving too little importance to the effect that an individual may have upon the group; perhaps we even forget that the group is made up of individuals whose interactions determine the emotional climate of the group, its behavior, and its relationships with other similar or dissimilar sets of associates. There is some point in group development and integration where the results of interchange among its members may pass from a more casual influencing of behavior and attitudes, to a therapeutic effect upon one or more of those composing the group. This is true whether the group is well organized for a particular purpose or is a more unstable one with no special objectives.

Even impromptu contacts between two people may result in a therapeutic or corrective effect upon one or both with respect to some attitude or belief which is adversely affecting behavior. Such effects are psychotherapeutic, rather than informative or educational, if, as happens, true insight develops regarding some complex or conflict which has been producing difficulties for the individual concerned. Education, certainly along many lines, also frequently has such effects. Indeed, the dispelling of ignorance may effectively relieve some particular area of anxiety, with resulting therapeutic effect.

We do not, however, ordinarily think of such incidental effects as belonging in the general field of psychotherapy, since they are not the result of any formulated procedure directed toward a specific problem of maladjustment. At the same time, there are many processes directed toward the development of the individual which are carried out in groups. A good example is social group work, the purpose of which is to help people toward the realization of relationships and the development of activities that will satisfy needs which are normal and, in a broad sense, legitimate. Recreational groups, art, and other classes, are examples of the purposive use of group activities suitable to such aims. The objectives are not essentially therapeutic, but rather the development of the normal potentialities of the person; but in these activities therapeutic results may emerge. To some extent, the segregation of people in hospitals and other institutions has somewhat the same objective, else we should not have developed so many specialized types of institutions, wards, and so on.

Segregation has in many instances one therapeutic objective, not necessarily expressed as such. That is, through association with others having similar or slightly different difficulties, to obtain some reduction of the feeling of aloneness, uniqueness, and the resultant actual or potential guilt feelings, anxiety or even hostility. One of the most illuminating conversations I ever had was with a highly intelligent and thoughtful college professor of physics who, as it turned out, had been twice in sanitaria because of depressions. What he brought out with reference to the things the patients discussed among themselves with regard to their own behavior and emotions, behavior in general, and social and mental traumata, remains for me the most striking set of commentaries ever heard respecting the therapeutic effects of verbal group interaction. One of the especially important things he said was that this was material which could not have been elicited by nurses or doctors. That this *could* be true in a hospital setting seems to be quite possible.

Dr. Joseph Pratt's paper on a "class method" in the home treatment of tuberculosis, which appeared in 1907, is usually cited as the first account of a formal attempt to apply group treatment. Reading this and other early accounts of such classes, the psy-

chotherapist experienced in group therapy as we think of it today is struck by one point. The physician conducting the class noted that attendance was quite regular, some members travelling fairly long distances, and that, after the lecture and question periods were over, the class would break up into small groups, each being usually made up of the same people. These groups were obviously regarded by the doctor as "social" in purpose. There is nowhere any indication that these groups were seen to be what, in my judgment, they actually were; that is, spontaneous therapy groups, not for the treatment of tuberculosis, naturally, but for the therapeutic effects of interpersonal relationships between the tuberculous.

What we mean by group therapy today is something different from those early "classes"; or the therapy carried out in England and shown on film in this country by Dr. MacClay; or even group sessions which I have attended or seen on film more recently. These again were lectures—good lectures, with good pictures, models, charts, and diagrams, followed by discussion periods—but the lecturer and his aides were at all times in control, and patient interaction was at a minimum, or did not exist.

That is *not* group therapy, no matter how salutary or perhaps therapeutic the effects may have been on the patients. The groups are large, so possibly this could well be called "didactic mass therapy." In the sense that any definitely organized procedure which eventually favorably influences the behavior and attitudes of those in the group, especially when such behavior or attitudes are unusual, (abnormal) this is therapy, and the method belongs at least on the fringe of group therapy.

There is no point in trying to establish priorities in this brief discussion, since many workers have contributed their bits. But if we can accept the concept that group psychotherapy is *primarily a matter of the therapeutic effects derived from the interaction of the group members,* then a workable definition emerges. The leader plays a variable role in group sessions, the chief—and most difficult—being that of a *member* of the group (*not* its director); but having special knowledge, an observational post, and interpretive insight to be used as needed, though sparingly and rarely in direct formulation. The leader does have serious behind-the-scenes responsibility in selecting members, balancing the group for greatest effectiveness, in protecting or stimulating members during sessions, in choice of materials and settings, in deciding when particular individuals need personal interviews or treatment, and for many other points. But in the sessions the more shadowy, though real, a figure he is, apparently the better the results.

Several distinct types of group psychotherapy, each with a pretty well delimited place, are now recognizable. These are: (1) activity group therapy, especially applicable to prepubertal groups; (2) spectator groups, such as puppet shows, which become participant groups as well; (3) verbal group therapy, in which there are several subtypes based on varied theoretical postulates which determine procedure; (4) psychodrama; (5) group psychoanalysis; (6) a combination of group living and group psychotherapy. Perhaps the aforementioned didactic type should be included as (7). A large literature has grown up in the field; the proponents of each type have made their approaches and results readily available.

One point of caution stands out most emphatically. One can not set up a therapy group by bringing together a group of ill or maladjusted persons and announcing that this is a therapy group, and that one is the group therapist. There are principles and techniques which must be understood before they can be adapted, and these are *not* identical with, though similar to, the soundest principles of good individual psychotherapy. It is unfortunate, but all too true, that many therapists who are very effective in individual treatment, where they are permissive and accept the patient at his own level of functioning, become transformed in the presence of a group. They fall into traditional class-room patterns; lecture, are authoritative, and seem to insist on being the center of the group, which is fatal to therapy. It is being able to follow along while the group sets its own pace and develops the emotional interplay which, in the long run, constitutes therapy, that is the attitude the

therapist must consistently carry out. This aspect deserves far more analysis than it has so far received. One thing is certain, namely, that physicians of any background of training and experience are good to excellent individual therapists is no guarantee that they will be successful in group therapy. In fact, it is my considered judgment that group psychotherapy is the most difficult of the therapeutic arts to learn, as it most certainly is to practice.

L. G. L.

POLITICS AND MENTAL HOSPITALS

Will it be believed that the miserable strife of Party feeling is carried even into this sad refuge of afflicted and degraded humanity? Will it be believed that the eyes which are to watch over and control the wanderings of minds on which the most dreadful visitation to which our nature is exposed has fallen, must wear the glasses of some wretched side in Politics? Will it be believed that the governor of such a house as this, is appointed, and deposed, and changed perpetually, as Parties fluctuate and vary, and as their despicable weathercocks are blown this way or that? A hundred times in every week, some new most paltry exhibition of that narrow-minded and injurious Party Spirit, which is the Simoom of America, sickening and blighting everything of wholesome life within its reach, was forced upon my notice; but I never turned upon it with feelings of such deep disgust and measureless contempt, as when I crossed the threshold of this madhouse.

—Charles Dickens,
American Notes

NEWS AND NOTES

Colonel Halloran Honored.—Posthumous award of the Army's Certificate of Achievement and the unveiling of a bronze plaque in honor of the late Col. Roy D. Halloran, M. C., took place at the Walter Reed Army Medical Center, Washington, D. C., December 15, 1953.

On behalf of The American Psychiatric Association, donor, Dr. Winfred Overholser, Superintendent of St. Elizabeths Hospital, Washington, D. C., presented the plaque to Maj. Gen. Leonard D. Heaton, M. C., Commanding General of the Center.

Maj. Gen. George E. Armstrong, The Army Surgeon General, presented the posthumous award of the Certificate of Achievement to Mrs. Franklin Navarro, Houston, Texas, daughter of Col. Halloran, and to his son, Mr. Donald Halloran, Washington, D. C.

The plaque reads as follows:

COLONEL ROY D. HALLORAN, MC

August 4, 1894—November 10, 1943
As a result of his unceasing efforts
psychiatry gained a status equal to
that of medicine and surgery in the
United States Army Medical Service

This Plaque Donated By
American Psychiatric Association

The Certificate, which credits Col. Halloran for establishing the groundwork for the army's present-day psychiatric program in World War II, reads, in part: "Through his planning and leadership, he organized psychiatric care in army hospitals, screening procedures in induction stations and various types of clinics at training centers. He also was instrumental in the permanent inclusion of psychiatrists in tables of organization for combat divisions."

Prizes for Paper on Epilepsy.—The American League Against Epilepsy announces the Jerry Price Memorial Prizes, contributed jointly by Mr. and Mrs. Fred Markham and the League: first prize, $500; second prize, $200; third prize, $100.

The contest is open to students in approved medical schools in the United States and Canada, contributions to be mailed before August 1, 1954, to Dr. J. K. Merlis, Secretary, American League Against Epilepsy, 150 South Huntington Avenue, Boston 30, Massachusetts, to whom also inquiries may be addressed.

Society for Applied Anthropology.—The 1954 annual meeting will be held April 9-11, at Columbia University, New York City, on invitation from the university. These dates will coincide with the first days of Columbia's bicentennial celebrations. The fact that other scientific bodies to whom invitations have been extended will be meeting at the same time will make this annual meeting of special interest to both members and others.

Inquiries may be addressed to the Society for Applied Anthropology, Box 185, Grand Central Station, New York 17, N. Y.

Manhattan State Hospital Lectures.—From March 19 to May 28, 1954, Dr. Sarah Breitbart will give a series of lectures at Manhattan State Hospital, Ward's Island, New York, on "Therapeutic Implications of Horney's Theory of Neurosis." Dr. Hyman L. Rachlin has given a series of 10 lectures on "Basic Concepts of Psychoanalysis," beginning January 8.

All meetings are held in the Keener Building, Friday afternoons at 1:30. Programs may be had upon request from Dr. John H. Travis, Director, Manhattan State Hospital.

The Accident-Prone in General Practice.—Dr. R. M. McGregor (B. M. J. Dec. 12, 1953), reporting on accident proneness in a small manufacturing town and environs in the Scottish Borders, concludes: (1) That accident-prone persons exist; (2) The accident-prone are also sick-prone; (3) Town dwellers are more accident-prone

than rural dwellers; (4) There seems to be a seasonal variation in accident occurrence, the greater number being in summer; (5) Accidents occurring during the season of greatest frequency are also the severest.

The American Orthopsychiatric Association.—The thirty-first annual meeting of the American Orthopsychiatric Association will be held at the Hotel Commodore, New York City, on March 11, 12, and 13, 1954. This is the first meeting of the Association in New York City since 1948. Approximately 90 scientific papers will be presented by psychiatrists, psychologists, social workers, educators, sociologists, and anthropologists.

The American Orthopsychiatric Association, founded in 1924, is an interdisciplinary association of psychiatrists, psychologists, social workers, and members of allied fields, including education, anthropology, and sociology. Its members come from all parts of the United States and Canada, and from foreign countries.

Officers for the current year are: Hyman S. Lippman, M. D., president; Jean W. Macfarlane, Ph. D., vice-president; Exie E. Welsch, M. D., secretary; William S. Langford, M. D., treasurer; Morris Krugman, Ph. D., past president; Gilbert J. Rich, M. D., and Margaret Mead, Ph. D., directors. Editor of the Journal is George E. Gardner, M. D., of Boston, Mass. President-elect is Simon H. Tulchin of New York City.

Inquiries should be directed to Dr. Marion F. Langer, American Orthopsychiatric Association, 1790 Broadway, New York 19, N. Y.

Mental Health Fund Campaign.—Dr. Richard Weil, Jr., President of the National Association for Mental Health, announces that a nationwide campaign to raise $5,000,000 for the Mental Health Fund will be launched in May of this year.

The support given to a similar campaign last year helped greatly to advance the fight against mental illness, and The National Association for Mental Health and its state and local affiliates appreciate the cooperation that was given.

Funds are urgently needed to finance research, to support efforts to improve conditions in mental hospitals, and to establish more mental health clinics throughout the country where early and proper treatment of mental ills can be provided.

The Mental Health Fund should receive everyone's support, and it is hoped that the fund raising campaign will be no less successful than last year. Contributions may be sent to the N. A. M. H., 1720 Broadway, New York 19, N. Y.

National Health Council.—The thirty-fourth annual meeting of the Council will be held March 24-26, 1954, in New York City. Dr. William P. Shepard, vice-president of the Metropolitan Life Insurance Company, has been appointed chairman of the National Health Forum which will feature this meeting, according to announcement by Philip E. Ryan, executive director of the Council.

Dr. Shepard is a member of the Health Resources Advisory Committee, Office of Defence Mobilization, and is a former president of the American Public Health Association and the National Tuberculosis Association. He was for 25 years clinical professor of public health and preventive medicine at Stanford University Medical School.

Health, education, and personnel leaders from all over the United States are expected to attend the Forum to discuss the problem of staffing America's health services. Three things are necessary, Dr. Shepard said: interesting young people in entering the health professions, providing educational facilities to prepare them for their tasks, and long-range employment plans that will keep the trained workers in health fields.

For information write to: National Health Council, 1790 Broadway, New York 19, N. Y.

Rehabilitation Fellowships.—The National Foundation for Infantile Paralysis has a limited number of fellowships available to psychiatrists interested in the psychological problems of the physically disabled, particularly of the poliomyelitis patient with respiratory paralysis. Eligibility requirements include two years of graduate training in

psychiatry acceptable to the American Board of Psychiatry and Neurology. Financial benefits are based on individual needs. Appointments will be made for one year, subject to renewal. The programs of the Fellows should be undertaken in a center for rehabilitation of the physicially disabled, affiliated with an approved department of psychiatry, which will be responsible for supervision and training of the Fellows.

For further information and application forms write: Division of Professional Education, National Foundation for Infantile Paralysis, 120 Broadway, New York 5, N. Y.

Washington Psychiatric Society.—At the sixth annual meeting of the Society held in Washington on January 8, 1954, Dr. Kenneth E. Appel, president of The American Psychiatric Association, who also addressed the membership on the subject "Fundamental Considerations in Psychiatric Treatment," presented to Dr. Henry P. Laughlin, the retiring president, on behalf of the Society a certificate of commendation for his many accomplishments during the past year.

Dr. Douglas Noble succeeds Dr. Laughlin as president. Other newly elected officers are: Dr. Marshall deG. Ruffin, president-elect; Dr. Seymour J. Rosenberg, secretary; Dr. Norman Taub, treasurer; Drs. Reginald S. Lourie and Julius Schreiber, council members. Dr. Laughlin will also serve as a member of the council for one year.

American Board of Psychiatry and Neurology.—At the December 1953 meeting, the officers and directors of the American Board of Psychiatry and Neurology, Inc. chose the following dates and places for the examinations for certification in psychiatry and/or neurology to be given by the Board:

December 13 and 14, 1954—New York City, N. Y.

February 28 and March 1, 1955—New Orleans, Louisiana.

Mid-October, 1955—San Francisco, California.

December, 1955—New York City, N. Y.

Inquiries may be addressed to: Dr. David A. Boyd, Jr., Secretary-Treasurer, 102-110 Second Avenue, S. W., Rochester, Minnesota.

Advice Concerning Multiple Sclerosis.—A new booklet for physicians, "Psychological Factors in the Care of Patients with Multiple Sclerosis," by Dr. Molly P. Harrower, New York psychologist, and Rosalind Herrmann, Boston social worker, has been published by the National Multiple Sclerosis Society. It contains valuable advice for physicians with multiple sclerosis patients and may be obtained by writing to the National Multiple Sclerosis Society, 270 Park Avenue, New York City. Its companion booklet for patients, "Mental Health and Multiple Sclerosis," by Dr. Molly H. Harrower, may also be had free of charge by writing to the Society.

World Heart Congress.—The nation's capital will be the scene of a historic world medical gathering September 12-17, 1954, when physicians and research scientists from many nations join their U. S. colleagues in Washington, D. C., for a combined meeting of the Second World Congress of Cardiology and the 27th Scientific Sessions of the American Heart Association. This will be the first international medical gathering of its kind to be held in the United States. (The first World Congress of Cardiology was held in Paris in September 1950.)

Formal scientific papers will be presented in English, French, and Spanish, constituting one of the most comprehensive programs relating to heart and blood vessel diseases ever presented.

Chairman of the organizational committee is Dr. Paul D. White, executive director of the National Advisory Heart Council and consultant in medicine at Massachusetts General Hospital, Boston.

For further information address inquiries to: American Heart Association, 44 East 23rd Street, New York 10, N. Y.

Treatment Facilities for Crippled Children.—A record expansion of facilities for crippled children in 1953 is reported by Lawrence J. Linck, executive director of the National Society for Crippled Children and adults in this Society's annual report recently issued.

The Society has completed 32 years of service to the nation's crippled and is now

represented by 874 specific services and facilities either in operation or in the process of development. These services are provided in each of the 48 states and in the District of Columbia, Alaska, Hawaii, and Puerto Rico.

For information address the National Society for Crippled Children and Adults, 11 South La Salle Street, Chicago 3, Illinois.

RORSCHACH WORKSHOP, SPRINGFIELD STATE HOSPITAL.—The department of psychology of Springfield State Hospital announces a 1-day workshop to be conducted by Dr. Zygmunt A. Piotrowski, March 19, 1954, from 10:00 a.m. to 4:00 p.m. The topic will be "The Diagnosis of Cerebral Disorders by the Use of the Rorschach." There is no fee.

For further information, write to Dr. Michael H. P. Finn, Chief Psychologist, Springfield State Hospital, Sykesville, Maryland.

FOURTH INTERNATIONAL COURSE IN CRIMINOLOGY.—This course, organized by the International Society of Criminology with the support of UNESCO, under the direction of Dr. Denis Carroll and Dr. Hermann Mannheim, will be given in London March 24 to April 13, 1954. There will be daily morning and afternoon sessions except on Sundays and April 7 and 8.

The subject of the course is "Recent Advances in the Study and Treatment of Offenders." It is open to members of all disciplines and professions having interest in criminology and penal problems. The lectures will be followed by discussions and visits to institutions. The fee for the course is £7 sterling.

For further information address: The Fourth International Course in Criminology, c/o I. S. T. D., 8 Bourden Street, Davies Street, London, W. 1, England.

WESTERN SOCIETY OF ELECTROENCEPHALOGRAPHY.—This Society will hold its eleventh annual meeting on March 7 and 8, 1954, at the Del Monte Lodge, Pebble Beach, California.

For further information write Dr. S. N. Berens, Secretary-Treasurer, 902 Boren Avenue, Seattle 4, Washington.

THE AMERICAN BOARD OF PSYCHIATRY AND NEUROLOGY, INC.

The following were certified at New York City, December 14 and 15, 1953.

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Diamond, Herbert, 4841 Pulaski Ave., Philadelphia 44, Penn.
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Gelfman, Morris N., VA Hosp., Downey, Ill.

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Kitchener, Murray, Rockland State Hosp., Orangeburg, N. Y.
Kleeman, James Allen, 256 Edwards St., New Haven 11, Conn.
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BOOK REVIEWS

Conferences on Drug Addiction among Adolescents. By *Fifty different people.* (New York: Blakiston, 1953. Price: $4.00.)

This book records verbatim 2 conferences held at the New York Academy of Medicine on November 30, 1951, and March 13 and 14, 1952. The conferences were sponsored by the Committee on Public Health Relations of the New York Academy of Medicine, with the assistance of the Josiah Macy, Jr. Foundation. Fifty-two persons are listed as contributors and the group is made up of not only doctors in various fields of medicine, including psychiatry, but judges, legislators, district attorneys, teachers, social workers, and law enforcement agents.

As might be anticipated, the book shows many differences of opinion which are quoted in detail so that the reader gets the feeling of a very interesting discussion as it actually took place. Some attempt is made to draw conclusions, but the main value of the book is this presentation of the problem of the various groups who are actually dealing with it and their differences of opinion. The book does not offer a final solution to the problem which, of course, is beyond our present state of knowledge. However, there are many interesting ideas about the narcotic problem, with much argument and controversy.

Many of the points that are well recognized by those who have worked on this problem are brought out, and for this reason the book makes excellent reading for anyone who wishes to become familiar with the latest thinking on the subject. It is pointed out that truancy and a falling-off of interest in school work and scholarship are often the first signs of drug addiction in adolescents and that such adolescents commonly show a marked lack of aggressiveness and of the normal sex interest. It is only when real bodily dependence on the drug develops and the individual is deprived of his drug that aggressiveness of a serious nature appears as a result of the individual's difficulty in finding enough of the drug to satisfy him.

It is also emphasized that the state of marked euphoria occurs only in the beginner and that with the development of true addiction the individual takes the drug largely to get relief from unpleasant symptoms. We also meet the statement that marijuana does not produce true addiction. This is correct, but is still bitterly attacked on the part of certain groups who cannot allow any statement that does not emphasize the harmful effects of drugs.

The book has a good deal of very interesting controversy over the subject of the reporting of drug addiction and of attempts at education. We hear such an authority as Dr. Haven Emerson stating, "I would say that more lives could be saved in New York City by a uniform reporting of all cases of obesity, than by reporting just the cases of drug addiction. We do not wish to require the reporting of cases of obesity, although these people suffer from a much more prevalent threat of early death than do any of those suffering from drug addiction."

Several discussants pointed out the difficulty of verifying whether an individual actually is a drug addict and the tremendous drain on the time of a health department, together with the indecisive results that would occur, if it should attempt to carry out an investigation of all reported drug addicts under a scheme of compulsory reporting. Most of the discussants continue to emphasize that smoking marijuana and using alcohol are often preliminaries to taking up the use of opium derivatives and cocaine. (The reviewer would like to remind our readers of a statement in the *Military Surgeon* that smoking tobacco cigarettes likewise seems to be a preliminary to smoking marijuana cigarettes.)

There is general agreement that present methods of treatment are quite unsatisfactory and do not secure an adequate number of cures. Several discussants emphasize the possibility of drug addiction being due to various physiological and endocrine factors. There is general agreement that there is no single type of personality who becomes a drug addict, just as there now seems general agreement that there is no one single type of person who becomes an alcoholic. The value of religion as achieving cures was emphasized by a number of speakers.

A very controversial discussion occurs after the showing of the film "Drug Addiction" to the group. Two other films, "H" and "The Terrible Truth" were also brought into the discussion.

K. M. B.

The Life and Work of Sigmund Freud. Volume 1: The Formative Years and the Great Discoveries, 1856-1900. By *Ernest Jones, M. D.* (New York: Basic Books. Price $6.75, 1953.)

Sigmund Freud initiated a new type of biographic study of illustrious men by linking up their unconscious motives with their conscious aspirations. Prone himself to make psychoanalytic comments on authors' fictional books, he paradoxically insisted that his own contributions should be judged independently of his personality. His own life should remain private and with this in mind, at the age of 28, he destroyed diaries which he had kept for many years. Nevertheless, a large number of articles and biographical books on Freud have already appeared. Some have used preponderantly the psychoanalytic technique, such as those by Siegfried Bernfeld, others have resorted frankly to description, and still others have indulged in misinformation and rancor, such as Emil Ludwig whose favorite field, biography, Freud had invaded. *The Life and Work of Sigmund Freud* by Ernest Jones, of which the first volume has recently appeared, has the great merit of complete accuracy and a superla-

tive amount of information. Jones also enjoyed the advantage of a unique combination of a long personal intimacy with Freud, familiarity with his writings, and an authoritative grasp of psychoanalysis, the science and art which Freud discovered and developed practically singlehandedly.

In this first volume, Jones' work embodies three aspects. First, it is a medical history of the early development of psychiatry and neurology in Central Europe during the last quarter of the nineteenth century, in the progress of which Meynert, Brücke, Charcot, and Bernheim played such prominent roles. All of this is interwoven with Freud's troubled professional career, from his eager early researches in neurophysiology and pathology to his transition and complete absorption in the psychopathology of mental disorders. This part of the book dealing with this period of medicine in Central Europe and the figures who motivated and dominated it will naturally have a specialized historical appeal only to physicians.

Secondly, the book is a brilliant and definitive account of the discovery and growth of psychoanalysis. It takes us through the groping steps of cathartic therapy, in association with Josef Breuer, into the troublous days of the evolution of Freud's thinking in his contact with Wilhelm Fliess, to his final self-emancipation from dependence on the latter. This eventually enabled Freud to contribute a body of knowledge which has been incorporated not only into psychiatric therapy but into almost all of the social sciences.

Finally, Jones' book is a penetrating psychoanalytic study of Freud's personality and neurotic physical (migraine, cardiac) and mental experiences (mental depression, train-phobia, etc.) which came so near wrecking him. Jones has had at his disposal innumerable private letters hitherto unpublished, and the aid of members of Freud's immediate family, making this in a sense an authorized biography. In this material of particular significance are the phases of Freud's childhood and family relationships, his vacillation in taking his medical degree, his long and agonized courtship of Martha Bernays, and his idolatrous attachment to Fliess.

For psychiatrists and psychoanalysts, Jones' delineation of the extraordinary relationship between Freud and Fliess is fascinating and enlightening. This association was revealed only three years ago with the publication of over 150 letters from Freud to Fliess still untranslated from the German. Basing his study upon Freud's letters, Jones utilizes his superior psychoanalytic skill, "for our purposes," to trace how Freud in his isolation and loneliness depended upon Fliess for support in his craving to create, and his need to pursue his explorations in search of psychological truths. He hoped, vainly to be sure, that the trusted Fliess could show him the way to bridge the gap between physiology and psychology into which he was plunging with an irresistible urge. The former was his first love and began about 1876 under Ernest Brücke with the study of the cells in the spinal cord of primitive fish.

Jones also points out the strong emotional attachment which Freud entertained toward Fliess—far more than vice versa. This made him look forward with idolatrous joy to the "scientific congresses" lasting two to three days in which only two members, Freud and Fliess, participated. In 1902 Freud finally freed himself of this attachment and it was followed by a bitterness and ridicule on his part, which so often occurs when relationships of such neurotic nature are severed. Significantly, in May 1900, about two months after Freud, at great emotional sacrifice, had mustered up the courage to deny himself another "congress" with Fliess, he writes: "No one can replace the intercourse with a friend that a particular—perhaps feminine—side of me demands." An accusation by Fliess that his ideas on bisexuality had seeped to Otto Weininger through a pupil of Freud was the direct cause of the complete break in 1903. Freud's defense was unconvincing.

Possibly Dr. Jones in his subsequent volumes will discuss the numerous analogous, often transient associations which developed between Freud and his disciples. Not so much those of the formative days of psychoanalysis (Wilhelm Stekel, Carl Jung and Alfred Adler) but those of later years, in particular the loyal Sandor Ferenczi and the one-time favored Otto Rank, would be of unusual interest.

The book is written in Jones' always exact, scholarly and lucidly flowing style. Since the work is essentially three books in one, all centering around a single individual, some overlapping and repetition are necessarily unavoidable. Inevitably the writer may fall into error of fact and contradictions in his estimate of his subject here and there. Jones may also invite objections to his own psychoanalytic interpretations, which because of his superior psychoanalytic knowledge, he repeatedly introduces.

To this reviewer the dearth of the actual facts about Freud's sexual life is somewhat regretable. Likewise one may question Jones' emphasis on the economic factors in Freud's prolonged engagement to Martha Bernays rather than the psychosexual elements which may have entered into the situation, and also the basis of Freud's painful vacillation in deciding whether he would devote himself to science or clinical medicine. Many other angles of Freud's conduct might take on meanings other than those given by Jones. Letters from Fliess to Freud which have not yet been made public but which are said to be extant could eventually alter Jones' analytic interpretations.

Because of the detail with which Jones has exhaustively pursued his task and the minutiae which he records, the book is extraordinarily instructive. As this reader passed from chapter to chapter of Jones' masterly work with its wealth of detail, he was reminded of a military canvas by Messonier where the main theme is both clear and evident yet equal attention has been given to each button on the officer's coat.

To be sure, Jones specifically states that the book "is not intended to be a popular biography." Nevertheless, it will surely have a wide appeal whether the reader be just an inquisitive browser who skips about the pages here and there, or the psychoanalyt-

ically oriented psychiatrist who can appreciate Dr. Jones' erudition and diligence. Jones realized that the task which confronted him in writing the life of Freud was in his own words a "stupendous" one. Nevertheless he did not flinch before the undertaking. This magnificent work seems destined to become the standard biography of the enigmatic personality who, with anguished courage, dared to plunge into the psychological aspects of the still unsolved problem of the interplay between psychology and physiology.

C. P. O.

THE HAND IN PSYCHOLOGICAL DIAGNOSIS. By *Charlotte Wolff*. (New York: Philosophical Library, 1952. Price: $7.50.)

The general area of concern of this volume is within the field of constitutional psychology; more specifically, it discusses the possibility of correlating certain anatomical features of the human hand with personality characteristics and with certain types of mental illness. As implied in the title and stated in the introduction, the hope is held that such correlations will contribute to psychologic and psychiatric diagnosis. The form of the monograph consists of a marshaling of theoretical arguments based importantly on psychoendocrinological hypotheses, together with reports of various clinical observations. In the development of her thesis, Dr. Wolff gives evidence of wide clinical experience in her field pursued with industry and enthusiasm. There seems little room for doubt that she would be capable of imparting an appreciable store of interesting information. However, for the reasons elucidated below, she has unhappily failed to write a good book. Those who have specialized interests in constitutional psychology will be in a better position to abstract some of her data for their purposes and in some instances will find stimulation. In this regard, even such readers should be forewarned of some of the objectionable features of the presentation. The main positive effect on other readers will probably be a wondering admiration of the author's ability to draw certain conclusions about personality from hand morphology.

Some of the faults in the book are not of great consequence except that they make it less convenient to enter into the subject matter. In this category are the unattractive paper and type and the author's prose. The last tends to be cumbersome in style and, in places, too awkward a mixture of philosophic meandering, objective reporting, and categorical declarations. Examples of the last are numerous. At times they are amusing, as when she says (p. 51) "It is common knowledge that monkeys and apes possess as a rule only one main transverse crease while humans have two." It is understandable that the expert might assume such knowledge to be common; however, here is implicit one of the major faults of the book. The author gives only sparse attention to matters which the nonexpert may reasonably expect to be discussed. For example, the actual technique of hand examination is inadequately, albeit lengthily, described; again, in other places, it is left to the reader to discern which finger is "the second finger." Conversely, the author provides discussions unnecessary for an audience with psychological or medical sophistication. In this regard, there are tedious, often only partially accurate descriptions of mental illnesses.

Yet all of the above objections could be overlooked if the major theme of the book were well transmitted, as it is not. The rationale for the correlation of personality characteristics with certain hand features is most unsatisfactorily presented. In view of the significance of such correlations, the practice of the author to refer the reader to her previous books and not to offer a summary of the possible verifications presumably given in those books is not excusable. However, even if one were willing to accept the probability of such correlations and were also willing to agree with the author's controversial opinions about psychoendocrinology, the conclusions reached from the actual data in this monograph are open to doubt. In the first place, the statistical tabulations have cumbersome technical arrangements and are often discussed without precise regard to the figures; in the second place, the statistical methods which give rise to the conclusions are grossly inadequate. In no important place, for example, are methods applied that allow a clear appreciation of the deviation of figures from a statistical norm or of the reliability of the findings and so on.

The negative criticism of the book rests mainly on these central defects rather than the more superficial inadequacies.

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DIE GRENZEN DER PSYCHOTHERAPIE. (LIMITATION OF PSYCHOTHERAPY.) By *G. Ewald*. (Stuttgart: Georg Thieme Verlag, 1952.)

In a time in which psychotherapy has become a more and more important form of treatment in psychiatry, this lecture of Ewald, a German clinical psychiatrist of stature, is important and impressive. He shows how the personality of the psychotherapist, in his opinion, becomes more important than the technique he uses. He shows how our time glorifies the psychotherapist. He speaks about the training of the young psychotherapist and how we try to make an encyclopedist of him. It is interesting that he, as well as other German psychotherapists including Kretschmer, is opposed to training analysis because, in their opinion, it has a negative and uneducational influence on the pupil. He believes that our type of training reminds one of mystical secret societies, such as the Free Masons, the Ku Klux Klan, etc.

In a brief, historical, critical review, he shows how the great psychotherapeutic school developed. He shows how Freud, a child of the materialistic era in the beginning of the 20th Century, tried to explain mental acts by the causality principle. He shows how the insight which he achieved by the study of neurosis was used in normal psychology and how depth psychology developed and became

more and more a mass movement. Neurosis, he writes, and I believe he is correct, is definitely on the increase, and this is a trend which, as demonstrated most clearly in the United States, is not at all retarded by the development of psychotherapy or the elevation of material living standards. Psychotherapy tries to cure all psychic troubles and to restore human dignity. He demonstrates the dangers of this overevaluation of psychotherapy. He presents the anatomical, physiological, and biological basis of psychotherapy as developed in the last 3 decades, and discusses more the importance of the thalamus and the diencephalon. All this started, in his opinion, with the studies of the Vienese neuropsychiatrist Von Economo, and he mentions his forerunners Meynert, Monakow, and Reichardt. He mentions the old experiments of Forel, Monk and Brum on the "Life of the Ants," and how the artificial destruction of higher instinctual actions makes lower instinctual acts come to the foreground and phylogenetic older mechanisms emerge in a process of regression which is very similar to the regression of neurosis. He shows further how the hypobulic and hypnoic mechanism neurologically and biologically offer an explanation for the "Flucht und Totstellreflex" of Kretschmer (flight or make believe death reflex).

In another part of his lecture, he criticizes the libido conception and the pansexualization of the whole psychic life in the theories of Freud. To discuss his criticism of the analerotic phase and the Oedipus and castration complex would be beyond the scope of this review.

Ewald does not believe that Adler is right in explaining the "nervous character" as the result of drives for power and inferiority feelings. Freud overestimated sexuality; Adler, on the contrary, underestimated it. Adler is wrong, in the opinion of the author, in the underestimating of hereditary factors and substituting for them organic inferiority and its overcompensation. It is not true that everything can be explained by bad education. It is not true that human beings are only the product of their environment. Ewald is in favor of the Jung theory of the collective unconscious because he believes that this is a much broader basis for the understanding of psychic problems. Of course, he says, it is very hard to prove it and you have a tremendous knowledge of myths and archaic thinking of primitives to understand it. He tries to show how the complex-solving psychoanalysis of Freud is supplemented by the ideas of Jung. He shows how the modern German psychotherapeutic school tried to regain the dignity of human beings. Ewald does not believe that all psychic phenomena can be understood purely biologically. He mentions the critics of Freud: Scheler, Jaspers, Dilthay, Spranger, Nicolas Hartman. Last, but not least, he mentions the Vienese psychotherapist Frankl with his logotherapy and the importance of human responsibility, and Von Gebsatel who wrote about "Christianity and Humanism," in which he debates the theory of Jung and "Der Gott in Unserer Eigenen Brust," (The God in our Own Heart). He shows how the existential analysis and *Daseinsanalyse Binswangers* are new ways of psychotherapy.

In the last pages of his booklet, he shows how he treats in practice. First of all, he orients himself organically and constitutionally. The somatic condition of the patient has to be cleared first. (He agrees wholeheartedly with G. H. Schultz that the young psychotherapist has first to study psychiatry). After this organic examination, one has to decide how much of the total personality is affected and what kind of psychotherapeutic treatment has to be used. Psychotherapy is, in the opinion of the author, a very important tool in addition to the somatic treatment.

I would advise American psychiatrists to read this small booklet because it shows how the German clinical psychiatrist sees psychotherapy. He tries to use an anatomical-physiological basis for the understanding of psychic phenomena. On the other side, psychotherapy is much influenced by the philosophy of Jaspers which is based on Kierkegaard, Nietzsche and Heidegger. He criticizes Freud, Adler, and Jung in one respect, but he recognizes that Freud, Adler, and Jung are very important personalities in psychotherapy. I quote one sentence from his lecture, "True, the great founders of psychoanalysis, Freud, Adler and Jung, have thought and said a great deal that is wise, even brilliant. I make this statement so emphatically, because I so far have deemed it necessary to point out their exaggerations, one-sidedness and aberrations, lest we slide backward into the period of 50 years ago." The author shows how human dignity and human responsibility become very important factors in psychotherapy. He shows how moralistic and ethical factors have become more and more important in the materialistic psychotherapy of yesterday.

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DAS PROBLEM DER SCHIZOPHRENIE. (THE PROBLEM OF SCHIZOPHRENIA.) By Harald Schultz-Henske. (Stuttgart: Georg Thieme Verlag, 1952.)

The author, who died in May 1953, tried in this book to show that schizophrenia and manic-depressive psychosis and several other psychoses have a pure psychological origin. They are purely exogenous and not a primary organic process. In one chapter, he discusses what we understand under a psychosis. In another chapter, he speaks about the correlation between experience and anatomical, morphological, and physiological facts. He gave to this chapter the title "Gleichzeitigkeitskorrelate" (Correlation of Concurrence). He shows that psychological understanding and physiological understanding are basically not different. In his opinion, schizophrenia is a variety of neurosis. In the whole chapter, he discusses the theory of neurosis. In 130 pages, he describes the analysis of one of his cases. In a historical review, he discusses the different psychological theories of schizophrenia. He starts with Ideler (1850), Griesinger (1845), the Jung, Freud, the case of Schreber—Nunberg (1920),

Herbert Binswanger (1931), and Ludwig Binswanger (1945).

Griesinger and Ideler lived before the entity of schizophrenia was coined. Griesinger was an organicist and for him mental diseases were brain diseases, so it is very hard to understand why he is called a forerunner of the psychological theories of psychosis. Unfortunately, the author did not know the great American literature on this topic. He mentions only Rosen, but he did not mention, for instance, Paul Federn who was a pioneer in this field or Fromm Reichman. In one of the last chapters, he discusses the future of psychiatry. I believe he is correct in that the study of psychiatry has to start with general pathology, with a precise description of the different psychic phenomena and that it is very important that the young psychotherapist gets a good theory of the neurosis. However, I can not fully agree with the idea of the author that the psychiatrist has to start as a psychiatrist and not as a neurologist; he says, and I quote, (in translation)—"He will not be disturbed by anatomic, morphological, and physiological facts and he will turn toward the primary psychic disturbances."

The problem of schizophrenia is really the main problem of psychiatry. Many psychiatrists consider psychosis identical with schizophrenia. A purely psychological theory with only organic correlation is not a solution to this problem, in my opinion. There is no question in my mind that in spite of the fact that many psychiatrists consider the 2 big entities of Kraepelin as stillbirths; his work was a useful one and a progressive step. The postulation of a single comprehensive neurosis, with schizophrenia as a variety of this neurosis, will not be a step to help us to better understand the problem of schizophrenia.

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THE ORIGIN OF LIFE AND THE EVOLUTION OF LIVING THINGS: AN ENVIRONMENTAL THEORY. By *O. R. Hyndman, M.D.* (New York: Philosophical Library, 1952. Price: $8.75.)

This lengthy book is a strange hodgepodge of philosophy, religion, genetics, and zoology. It comprises 4 main sections: Origin of Living Matter, Reproduction, Organic Evolution, and A Proposed Theory of Evolution.

The chief contention of the book is that organic evolution is determined directly by environment. The author is unfamiliar with recent genetic theories and it would almost seem that he has taken his college notes of 20 years ago and elaborated upon them. The preface suggests that he is now a neurosurgeon and certainly few writers can wander into fields other than their own and not get into difficulties.

At the outset the author states his religious position and assures his readers "that one need not abandon the concept of God nor that God established the principle of life." He suggests that we assume that "God is sufficiently omnipotent that his system is perfect in its beginning and throughout such that He does not have to interfere in order to grease the machinery, repair the cogs or play favorites."

Hyndman calls his thesis the R.R.S. Theory because Reaction, Retracement, and Summation are the conceptual pillars. Reaction embodies the origin of living substance and its progressive adaptation. Retracement includes reproduction and heredity, while the organismal type is the expression of their Summation.

To this reviewer the book is most disappointing, being based mainly on armchair philosophy and full of biological inaccuracies.

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THE UNIVERSE OF MEANING. By *Samuel Reiss.* (New York: Philosophical Library, 1953. Price: $3.75.)

The author attempts to evolve his ideas on the nature of the concept of meaning. Beginning with the actual interrelationships of words within a given language, he progresses to the notion that "words themselves . . . owe their elevated status only to the elevated meanings with which they have come to be associated." He further points out that "the symbol being the concrete representation of the abstract meaning which it is intended to convey, there has always been a decided human tendency to confuse and, to a certain extent, identify the two." These statements from his summary—a point he reaches only after a complicated and circumstantial piece of writing—leave him at about the point Korzybski started when he formulated his map-territory relationship.

It is always interesting to watch the workings of a man's thinking processes as he digs into a new problem, and this book, if so used, is intriguing. Attacking an age-old question, he tediously works his way to conclusions already reached by previous thinkers, and discovers what has already been evolved by many philosophers of science—that science itself does not possess "autonomous, absolute objectivity," but that better understanding of the symbols will be achieved only through deeper insight into the minds of the men making the evaluations. This the author believes will "bring about a revolution in all sciences." The naivete lies not in the notion but in the lack of information on the part of the author that this idea, long ago developed by others, has already brought about the prognosticated revolution.

The book obviously is hardly worth the effort of reading unless it be used as a lesson in thinking or as a demonstration of the need for philosophers to read the already worked-out approaches of others before they rediscover the obvious.

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Inside: *a Hospital*

THIS stately mansion, first seen of the several buildings along our private road, is the "open" unit of this private psychiatric hospital. Like the others, it is as attractive outside and in as we can make it. We think that pleasant surroundings, fine food, and good housekeeping are a proper part of treatment at Hall-Brooke.

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Hall-Brooke has privacy with convenience—a pleasant hour by car or mainline train from New York. The doctor with a patient needing psychiatric care can recommend this 55-year old establishment with confidence; and the doctor or relative who wants to see for himself is always welcome.

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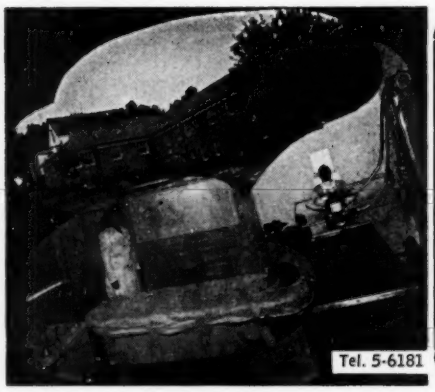

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